

Sequence Listing

- <110> Ashkenazi, Avi J.
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 Botstein, David
 Desnoyers, Luc
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 Ferrara, Napoleone
 Fong, Sherman
 Gerber, Hanspeter
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 Goddard, Audrey
 Godowski, Paul J.
 Grimaldi, J. Christopher
 Gurney, Austin L.
 Kljavin, Ivar J.
 Napier, Mary A.
 Pan, James
 Paoni, Nicholas F.
 Roy, Margaret Ann
 Stewart, Timothy A.
 Tumas, Daniel
 Watanabe, Colin K.
 Williams, P. Mickey
 Wood, William I.
 Zhang, Zemin
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 tcaagcagaa gagagataag ttgatgtcca tgagaaagga tatgaggact 1150
 aaacagatac aaaatatgga gcagaaagga aaaccactg gggaggtaga 1200
 ggaaatgaca gagaaaccag aaatgacagc agaggagaag caaacattac 1250
 taaagaggag attgcttgca gagaaactca aagaagaagt tattaataag 1300
 taataattaa gaacaattta acaaaatgga agttcaaatt gtcttaaaaa 1350
 taaattattt agtccttaca ctg 1373

<210> 8
 <211> 367
 <212> PRT
 <213> Homo sapiens

<400> 8
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 1 5 10 15
 Ile Ala Gly Phe Leu Arg Gly Pro Asp Trp Ser Ile Pro Ile Leu
 20 25 30
 Asp Phe Val Glu Gln Lys Cys Glu Val Asn Cys Lys Gly Gly His
 35 40 45
 Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys
 50 55 60
 Val Pro Leu Val Phe Asp Asp Glu Glu Glu Ser Lys Leu Thr Tyr
 65 70 75
 Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu
 80 85 90
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln
 95 100 105
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala
 110 115 120
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys
 125 130 135
 Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile
 140 145 150

tggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350
 ttgaacacga agagatgaaa atcctgaggg aagttcttag aaaatcaaaa 400
 gaggaatatg accaggaa 418

<210> 10
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 10
 ttgacctata cagagattca tc 22

<210> 11
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 11
 ctaagaactt ccctcaggat ttt 23

<210> 12
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 12
 atgaagatca atttcaagaa gcatgcactt ctcctcttgc 40

<210> 13
 <211> 2886
 <212> DNA
 <213> Homo sapiens

<400> 13
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 tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 150
 cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 200
 acagtgctgt agtcactctg taatatgctc cttgtcaaca atgtatacat 250
 tcctgctagg tgccatattc attgctttta gctcaagtcg catcttacta 300
 gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 350
 tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 400
 cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 450

tcctggaagg aattctctga ttatcatgaag tgggccattc ctgcctttct 500
 ttatttctctg gataacttga ttgtcttcta tgcctgtcc tatcttcaac 550
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 ctttacagca caacttggca ggacgtggat ttcatcacga tgcctttttc 750
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<210> 15
 <211> 755
 <212> DNA
 <213> Homo sapiens

<400> 15
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 ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgctgc 150
 tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 200
 cactagaagc tcttctgagg gaggtaatta aaaaacagtg gaatggaaaa 250
 acagtgctgt agtcatcctg taatatgctc cttgtcaaca atgtatacat 300
 tcctgctagg tgccatattc attgctttta gctcaagtcg catcttacta 350
 gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 400
 tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 450
 cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 500
 tcctggaagg aattctctga ttcatgaag tgggccattc ctgcctttct 550
 ttatttctctg gataacttga ttgtcttcta tgcctgtcc tatcttcaac 600
 cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 650
 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700
 cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750
 cttta 755

<210> 16
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 16
 ctatacctac tgtagcttct 20

<210> 17
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 17
 tcagagaatt ccttccagga 20

<210> 18
 <211> 40
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtgtg agtcatcctg taatatgctc cttgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

cggacgcgtg ggcgagcgcg tggcgagcg cgtggggccg gcttggttag 50
cgcgcgggcg ccgtggctaa ggctgctacg aagcgagctt gggaggagca 100
gcggcctgcg gggcagagga gcatcccgtc taccaggtcc caagcggcgt 150
ggcccgcggg tcatggccaa aggagaaggc gccgagagcg gctccgcggc 200
ggggctgcta cccaccagca tcctccaaag cactgaacgc ccggcccagg 250
tgaagaaaga accgaaaaag aagaaacaac agttgtctgt ttgcaacaag 300
ctttgctatg cacttggggg agccccctac caggtgacgg gctgtgccct 350
gggtttcttc cttcagatct acctattgga tgtggctcag gtggggccctt 400
tctctgcctc catcatcctg tttgtgggcc gagcctggga tgccatcaca 450
gacccccctg tgggcctctg catcagcaaa tccccctgga cctgcctggg 500
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tacctgcttt tctattgctt ctttgaaaca atggtcacgt gtttccatgt 650
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ggatctcatc agcagtgcc tttctcatct tggaggccct catggagagt 1300
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cactgtgggg ccggtgctc tgtggcctcc tgctccctct ctgctgcct 1950
gtggggccaa gccctggggc tgccactgtg aatatgccaa ggactgatcg 2000
ggcctagccc ggaacactaa tgtagaaacc ttttttttac agagcctaata 2050
taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100
gtgagctatt aatgttatta attttcataa aagctggaaa gc 2142

<210> 20
<211> 458
<212> PRT
<213> Homo sapiens

<400> 20
Met Trp Leu Arg Trp Ala Leu Ser Leu Pro Pro Ser Ser Cys Leu
1 5 10 15
Trp Ala Glu Pro Gly Met Pro Ser Gln Thr Pro Trp Trp Ala Ser
20 25 30
Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro
35 40 45
Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser
50 55 60
Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr
65 70 75
Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met
80 85 90
Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr
95 100 105

Glu	Arg	Asp	Ser	Ala	Thr	Ala	Tyr	Arg	Met	Thr	Val	Glu	Val	Leu	110	115	120
Gly	Thr	Val	Leu	Gly	Thr	Ala	Ile	Gln	Gly	Gln	Ile	Val	Gly	Gln	125	130	135
Ala	Asp	Thr	Pro	Cys	Phe	Gln	Asp	Phe	Asn	Ser	Ser	Thr	Val	Ala	140	145	150
Ser	Gln	Ser	Ala	Asn	His	Thr	His	Gly	Thr	Thr	Ser	His	Arg	Glu	155	160	165
Thr	Gln	Lys	Ala	Tyr	Leu	Leu	Ala	Ala	Gly	Val	Ile	Val	Cys	Ile	170	175	180
Tyr	Ile	Ile	Cys	Ala	Val	Ile	Leu	Ile	Leu	Gly	Val	Arg	Glu	Gln	185	190	195
Arg	Glu	Pro	Tyr	Glu	Ala	Gln	Gln	Ser	Glu	Pro	Ile	Ala	Tyr	Phe	200	205	210
Arg	Gly	Leu	Arg	Leu	Val	Met	Ser	His	Gly	Pro	Tyr	Ile	Lys	Leu	215	220	225
Ile	Thr	Gly	Phe	Leu	Phe	Thr	Ser	Leu	Ala	Phe	Met	Leu	Val	Glu	230	235	240
Gly	Asn	Phe	Val	Leu	Phe	Cys	Thr	Tyr	Thr	Leu	Gly	Phe	Arg	Asn	245	250	255
Glu	Phe	Gln	Asn	Leu	Leu	Leu	Ala	Ile	Met	Leu	Ser	Ala	Thr	Leu	260	265	270
Thr	Ile	Pro	Ile	Trp	Gln	Trp	Phe	Leu	Thr	Arg	Phe	Gly	Lys	Lys	275	280	285
Thr	Ala	Val	Tyr	Val	Gly	Ile	Ser	Ser	Ala	Val	Pro	Phe	Leu	Ile	290	295	300
Leu	Val	Ala	Leu	Met	Glu	Ser	Asn	Leu	Ile	Ile	Thr	Tyr	Ala	Val	305	310	315
Ala	Val	Ala	Ala	Gly	Ile	Ser	Val	Ala	Ala	Ala	Phe	Leu	Leu	Pro	320	325	330
Trp	Ser	Met	Leu	Pro	Asp	Val	Ile	Asp	Asp	Phe	His	Leu	Lys	Gln	335	340	345
Pro	His	Phe	His	Gly	Thr	Glu	Pro	Ile	Phe	Phe	Ser	Phe	Tyr	Val	350	355	360
Phe	Phe	Thr	Lys	Phe	Ala	Ser	Gly	Val	Ser	Leu	Gly	Ile	Ser	Thr	365	370	375
Leu	Ser	Leu	Asp	Phe	Ala	Gly	Tyr	Gln	Thr	Arg	Gly	Cys	Ser	Gln	380	385	390
Pro	Glu	Arg	Val	Lys	Phe	Thr	Leu	Asn	Met	Leu	Val	Thr	Met	Ala	395	400	405
Pro	Ile	Val	Leu	Ile	Leu	Leu	Gly	Leu	Leu	Leu	Phe	Lys	Met	Tyr	410	415	420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
 425 430 435

Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
 440 445 450

Ser Thr Glu Leu Ala Ser Ile Leu
 455

<210> 21
 <211> 571
 <212> DNA
 <213> Homo sapiens

<400> 21
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 tatataatct gtgctgtcat cctgatcctg ggcgtgcggg agcagagaga 100
 accctatgaa gcccgagcagt ctgagccaat cgcctacttc cggggcctac 150
 ggctgggtcat gagccacggc ccatacatca aacttattac tggcttcctc 200
 ttcacctcct tggctttcat gctgggtggag gggaactttg tcttgttttg 250
 cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctcttggtcca 300
 tcatgctctc ggccacttta accattccca tctggcagtg gttcttgacc 350
 cggttttgga agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
 atttctcatc ttgggtggcc tcatggagag taacctcatc attacatatg 450
 cggtagctgt ggcagctggc atcagtgtgg cagctgcctt ctactaccc 500
 tgggtccatgc tgccatgatg cattgacgac ttccatctga agcagcccca 550
 cttccatgga accgagccca t 571

<210> 22
 <211> 1173
 <212> DNA
 <213> Homo sapiens

<400> 22
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 aaagggtgcag gtatgagcag gtctgaagac taacattttg tgaagttgta 100
 aaacagaaaa cctgttagaa atgtgggtgt ttcagcaagg cctcagtttc 150
 cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200
 cattactgca gtaaacctcc accatataga cccggcttta ctttatatca 250
 gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300
 aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350
 agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400
 ctggccttgt acttggaata ctgagttggt taggaacttc tattgtggca 450

aacttcacaga aaacaaccct ttttgctgca catgtaagtg gagctgtgct 500
 taccttttgggt atgggctcat tatatatgtt tgttcagacc atcctttcct 550
 accaaatgca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600
 ttgttggtta tctgggtgtg agtaagtgca cttagcatgc tgacttgctc 650
 atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700
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 ctactttcca gagatatttg atgaaaggat aaaatatttc tgtaatgatt 950
 atgattctca gggattgggg aaagggtcac agaagttgct tattcttctc 1000
 tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050
 gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
 atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150
 gaaaataaag tcaaaagact atg 1173

<210> 23
 <211> 266
 <212> PRT
 <213> Homo sapiens

<400> 23
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 Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala
 20 25 30
 Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp
 35 40 45
 Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu
 50 55 60
 Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr
 65 70 75
 Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys
 80 85 90
 Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly
 95 100 105
 Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala
 110 115 120
 His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr
 125 130 135

Met	Phe	Val	Gln	Thr	Ile	Leu	Ser	Tyr	Gln	Met	Gln	Pro	Lys	Ile
				140					145					150
His	Gly	Lys	Gln	Val	Phe	Trp	Ile	Arg	Leu	Leu	Leu	Val	Ile	Trp
				155					160					165
Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu
				170					175					180
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp
				185					190					195
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala
				200					205					210
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr
				215					220					225
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn
				230					235					240
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn
				245					250					255
Asn	Glu	Arg	Thr	Arg	Leu	Leu	Ser	Arg	Asp	Ile				
				260					265					

<210> 24
 <211> 485
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 14, 484
 <223> unknown base

<400> 24
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 ctgatgccga gttccgtctc tcgggtcttt tcttggtccc aggcaaagcg 100
 gagcggagat cctcaaacgg ctagtgctt cgcgcttccg gagaaaatca 150
 gcgggtctaataattcctct ggtttggtga agcagttacc aagaatcttc 200
 aaccctttcc cacaaaagct aattgagtac acgttctctg tgagtacaag 250
 ttcctgttga ttacaaaag gtgcaggtat gacaggtct gaagactaac 300
 attttgtgaa gttgtaaaac agaaaacctg ttagaaatgt ggtgggtttca 350
 gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400
 ctttcatatt ttcatacatt actgcagtaa cactccacca tatagaccog 450
 gctttacctt atatcagtga cactggtaca gtanc 485

<210> 25
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
acctgttaga aatgtggtgg tttagcaag gcctcagttt 40

<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27
<211> 1399
<212> DNA
<213> Homo sapiens

<400> 27
cccacgcgtc cgcccgccgc tgcgtcccg agtgcaagt agcttctcgg 50
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gactgccccg cgggcccgaga ctgggctcca ccgaggaggc tggaggcagg 200
tcgctgtggt tcccctccga cctggcagag ctgcgggagc tctctgaggt 250
ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctcttct 300
gcggcgcccta cctctacaaa cagggtttg ccatccccgg ctccagcttc 350
ctgaatgttt tagctggtgc cttgtttggg ccatggctgg ggcttctgct 400
gtgctgtgtg ttgacctcg tgggtgccac atgctgctac ctgctctcca 450
gtattttttg caaacagtgt gtggtgtcct actttcctga taaagtggcc 500
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cattgttttt gattgccttc tataggatgt gtggacactg tgcataatg 1000

tgcagtgtct tttcagaaag gacactctgc tcttgaaggt gtattacatc 1050
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 agcctggcca agatggtgaa atcctgtctc taataaaaat acaaaaatta 1250
 gccaggcgtg gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300
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<210> 28

<211> 264

<212> PRT

<213> Homo sapiens

<400> 28

Met	Arg	Pro	Leu	Leu	Gly	Leu	Leu	Leu	Val	Phe	Ala	Gly	Cys	Thr	1	5	10	15
Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg	20	25	30	
Leu	Gly	Ser	Thr	Glu	Glu	Ala	Gly	Gly	Arg	Ser	Leu	Trp	Phe	Pro	35	40	45	
Ser	Asp	Leu	Ala	Glu	Leu	Arg	Glu	Leu	Ser	Glu	Val	Leu	Arg	Glu	50	55	60	
Tyr	Arg	Lys	Glu	His	Gln	Ala	Tyr	Val	Phe	Leu	Leu	Phe	Cys	Gly	65	70	75	
Ala	Tyr	Leu	Tyr	Lys	Gln	Gly	Phe	Ala	Ile	Pro	Gly	Ser	Ser	Phe	80	85	90	
Leu	Asn	Val	Leu	Ala	Gly	Ala	Leu	Phe	Gly	Pro	Trp	Leu	Gly	Leu	95	100	105	
Leu	Leu	Cys	Cys	Val	Leu	Thr	Ser	Val	Gly	Ala	Thr	Cys	Cys	Tyr	110	115	120	
Leu	Leu	Ser	Ser	Ile	Phe	Gly	Lys	Gln	Leu	Val	Val	Ser	Tyr	Phe	125	130	135	
Pro	Asp	Lys	Val	Ala	Leu	Leu	Gln	Arg	Lys	Val	Glu	Glu	Asn	Arg	140	145	150	
Asn	Ser	Leu	Phe	Phe	Phe	Leu	Leu	Phe	Leu	Arg	Leu	Phe	Pro	Met	155	160	165	
Thr	Pro	Asn	Trp	Phe	Leu	Asn	Leu	Ser	Ala	Pro	Ile	Leu	Asn	Ile	170	175	180	
Pro	Ile	Val	Gln	Phe	Phe	Phe	Ser	Val	Leu	Ile	Gly	Leu	Ile	Pro	185	190	195	
Tyr	Asn	Phe	Ile	Cys	Val	Gln	Thr	Gly	Ser	Ile	Leu	Ser	Thr	Leu	200	205	210	

Thr	Ser	Leu	Asp	Ala	Leu	Phe	Ser	Trp	Asp	Thr	Val	Phe	Lys	Leu
				215					220					225
Leu	Ala	Ile	Ala	Met	Val	Ala	Leu	Ile	Pro	Gly	Thr	Leu	Ile	Lys
				230					235					240
Lys	Phe	Ser	Gln	Lys	His	Leu	Gln	Leu	Asn	Glu	Thr	Ser	Thr	Ala
				245					250					255
Asn	His	Ile	His	Ser	Arg	Lys	Asp	Thr						
				260										

<210> 29
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<400> 29
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 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
 tcagagactg ttgatttggg gagacagacc ggccatcagt gtggcatgtc 250
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
 ctgagagacc cccccgcag tatcctctcc ttatagttgt gtataagggt 350
 ctgcgaacct tgggattaat cttgctcact gcctactttg tgattcaacc 400
 tttcagccca ttagcacctg agccagtgtt ttctggagct cacacctggc 450
 gctcactcat ccatcacatt aggctgatgt ccttgcccat tgccaagaag 500
 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550
 accctttcca gactttgacc cctggtggac aaacgactgt gagcagaatg 600
 agtcagagcc cattcctgcc aactgcactg gctgtgcccc gaaacacctg 650
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 gccaaagtggg ggcgctgctt tcctgagcgg tggttcccat ttccttatcc 850
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 cctattttatc attggcagcg gtgaggccat gttgcagctc atccctccct 1050
 tccagtgccg aagacattgt cagtctgtgg ccatgccaat agagccaggg 1100
 gatatcggt atgtcgacac caccactgg aaggtctacg ttatagccag 1150

aggggtccag ccttttggtca tctgcatgg aaccgctttc tcagaactgt 1200
 aggaaataga actgtgcaca ggaacagctt ccagagccga aaaccaggtt 1250
 gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 30
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 Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met 30
 20 25
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys 45
 35 40
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val 60
 50 55
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala 75
 65 70
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val 90
 80 85
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg 105
 95 100
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys 120
 110 115
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp 135
 125 130
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu 150
 140 145
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys 165
 155 160
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His 180
 170 175
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile 195
 185 190
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser 210
 200 205
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp 225
 215 220
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln 240
 230 235
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro 255
 245 250

Lys	Asp	Ala	Ser	Leu	Asn	Lys	Cys	Ser	Phe	Leu	His	Pro	Glu	Pro
				260					265					270
Val	Val	Gly	Ser	Lys	Met	His	Lys	Met	Pro	Asp	Leu	Phe	Ile	Ile
				275					280					285
Gly	Ser	Gly	Glu	Ala	Met	Leu	Gln	Leu	Ile	Pro	Pro	Phe	Gln	Cys
				290					295					300
Arg	Arg	His	Cys	Gln	Ser	Val	Ala	Met	Pro	Ile	Glu	Pro	Gly	Asp
				305					310					315
Ile	Gly	Tyr	Val	Asp	Thr	Thr	His	Trp	Lys	Val	Tyr	Val	Ile	Ala
				320					325					330
Arg	Gly	Val	Gln	Pro	Leu	Val	Ile	Cys	Asp	Gly	Thr	Ala	Phe	Ser
				335					340					345

Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
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 agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200
 ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250
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 aaaatttatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttgga 400
 ttaatcttgc tcaactgccta ctttgtgatt caacctttca gcccattagc 450
 acctgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
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 ccactgatga ggcaggggcc ccaattgcag ctgcagcagc tgcagcagct 100
 gcagagcgtc gtcctggct ggtgccactg gtgcgcacgc tgctagaccg 150
 tgcctatgag ccgctggggc tgcagtgggg actgccctcc ctgccacca 200
 ccaatggcag cccacacctc tttgaagact tccaggcttt ttgtgccaca 250

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 ggaatgcctg ctatgacatg cttatgagca gtgggcagcg ggcgccagtgg 400
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 agctggtgcc caaccatcac ttcgaccctc acctggaagc cagcgtctc 700
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ggggccgccc tgagggccag cactggcgctc t 3531

<210> 33

<211> 1003

<212> PRT

<213> Homo sapiens

<400> 33

Met Ser Gln Phe Glu Met Asp Thr Tyr Ala Lys Ser His Asp Leu
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Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser
20 25 30

Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe
35 40 45

Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu
50 55 60

Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His
65 70 75

Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala
80 85 90

Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg
95 100 105

Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys
110 115 120

Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala
125 130 135

Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu
140 145 150

Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr
155 160 165

Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu
170 175 180

Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln
185 190 195

Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val
200 205 210

Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val
215 220 225

Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly
230 235 240

Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val
245 250 255

His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe
260 265 270

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	
				275					280					285	
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	
				290					295					300	
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	
				305					310					315	
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	
				320					325					330	
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	
				335					340					345	
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	
				350					355					360	
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	
				365					370					375	
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	
				380					385					390	
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	
				395					400					405	
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	
				410					415					420	
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	
				425					430					435	
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	
				440					445					450	
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	
				455					460					465	
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	
				470					475					480	
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	
				485					490					495	
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	
				500					505					510	
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	
				515					520					525	
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	
				530					535					540	
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	
				545					550					555	
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	
				560					565					570	
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	
				575					580					585	

Gly Ala Val Asp	Leu Asp His Val Thr	Asp Glu Arg Glu Arg Lys	590	595	600
Ala Leu Glu Gly	Ile Ile Ser Asn Phe	Gly Gln Thr Pro Cys Gln	605	610	615
Leu Leu Lys Glu	Pro His Pro Thr Arg	Leu Ser Ala Glu Glu Ala	620	625	630
Ala His Arg Leu	Ala Arg Leu Asp Thr	Asn Ser Pro Ser Ile Phe	635	640	645
Gln His Leu Asp	Glu Leu Lys Ala Phe	Phe Ala Glu Val Thr Val	650	655	660
Ser Ala Ser Gly	Leu Leu Gly Thr His	Ser Trp Leu Pro Tyr Asp	665	670	675
Arg Asn Ile Ser	Asn Tyr Phe Ser Phe	Ser Lys Asp Pro Thr Met	680	685	690
Gly Ser His Lys	Thr Gln Arg Leu Leu	Ser Gly Pro Trp Val Pro	695	700	705
Gly Ser Gly Val	Ser Gly Gln Ala Leu	Ala Val Ala Pro Asp Gly	710	715	720
Lys Leu Leu Phe	Ser Gly Gly His Trp	Asp Gly Ser Leu Arg Val	725	730	735
Thr Ala Leu Pro	Arg Gly Lys Leu Leu	Ser Gln Leu Ser Cys His	740	745	750
Leu Asp Val Val	Thr Cys Leu Ala Leu	Asp Thr Cys Gly Ile Tyr	755	760	765
Leu Ile Ser Gly	Ser Arg Asp Thr Thr	Cys Met Val Trp Arg Leu	770	775	780
Leu His Gln Gly	Gly Leu Ser Val Gly	Leu Ala Pro Lys Pro Val	785	790	795
Gln Val Leu Tyr	Gly His Gly Ala Ala	Val Ser Cys Val Ala Ile	800	805	810
Ser Thr Glu Leu	Asp Met Ala Val Ser	Gly Ser Glu Asp Gly Thr	815	820	825
Val Ile Ile His	Thr Val Arg Arg Gly	Gln Phe Val Ala Ala Leu	830	835	840
Arg Pro Leu Gly	Ala Thr Phe Pro Gly	Pro Ile Phe His Leu Ala	845	850	855
Leu Gly Ser Glu	Gly Gln Ile Val Val	Gln Ser Ser Ala Trp Glu	860	865	870
Arg Pro Gly Ala	Gln Val Thr Tyr Ser	Leu His Leu Tyr Ser Val	875	880	885
Asn Gly Lys Leu	Arg Ala Ser Leu Pro	Leu Ala Glu Gln Pro Thr	890	895	900

Ala	Leu	Thr	Val	Thr	Glu	Asp	Phe	Val	Leu	Leu	Gly	Thr	Ala	Gln
				905					910					915
Cys	Ala	Leu	His	Ile	Leu	Gln	Leu	Asn	Thr	Leu	Leu	Pro	Ala	Ala
				920					925					930
Pro	Pro	Leu	Pro	Met	Lys	Val	Ala	Ile	Arg	Ser	Val	Ala	Val	Thr
				935					940					945
Lys	Glu	Arg	Ser	His	Val	Leu	Val	Gly	Leu	Glu	Asp	Gly	Lys	Leu
				950					955					960
Ile	Val	Val	Val	Ala	Gly	Gln	Pro	Ser	Glu	Val	Arg	Ser	Ser	Gln
				965					970					975
Phe	Ala	Arg	Lys	Leu	Trp	Arg	Ser	Ser	Arg	Arg	Ile	Ser	Gln	Val
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Ser	Ser	Gly	Glu	Thr	Glu	Tyr	Asn	Pro	Thr	Glu	Ala	Arg		
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<210> 34
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

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<210> 35
 <211> 1395
 <212> DNA
 <213> Homo sapiens

<400> 35
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 ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga cccttaactg 200
 ggtactggcc ctgggccaat gcgtcctgc tggagccttt gcctccttct 250
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 gccttcatcc gcacactccg ttaccacact gggtcattgg catttggagc 350
 cctcatcctg acccttgtgc agatagcccg ggtcatcttg gagtatattg 400
 accacaagct cagaggagtg cagaaccctg tagcccgctg catcatgtgc 450
 tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500
 ccgcaatgca tacatcatga tcgccatcta cggaagaat ttctgtgtct 550
 cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtgggc 600
 gtcttgaca aagtcacaga cctgctgctg ttctttggga agctgctggt 650

ggtcggaggc gtgggggtcc tgccttctt tttttctcc ggtcgcaccc 700
 cggggctggg taaagacttt aagagcccc acctcaacta ttactggctg 750
 cccatcatga cctccatcct gggggcctat gtcacgcca gcggcttctt 800
 cagcgttttc ggcatgtgtg tggacacgct cttcctctgc ttcctggaag 850
 acctggagcg gaacaacggc tccctggacc ggccctacta catgtccaag 900
 agccttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950
 gaagaggaag aagtgcacgc tccggccctg atccaggact gcacccacc 1000
 cccaccgtcc agccatccaa cctcacttcg ccttacaggt ctccattttg 1050
 tggtaaaaaa aggttttagg ccaggcgccg tggctcacgc ctgtaatcca 1100
 acactttgag aggctgaggc gggcgcatca cctgagtcag gagttcgaga 1150
 ccagcctggc caacatgggtg aaacctccgt ctctattaaa aatacaaaaa 1200
 ttagccgaga gtggtggcat gcacctgtca tcccagctac tcgggaggct 1250
 gaggcaggag aatcgcttga acccgggagg cagaggttgc agtgagccga 1300
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 aaacaaacaa acaaaaagat tttattaaag atattttgtt aactc 1395

<210> 36
 <211> 321
 <212> PRT
 <213> Homo sapiens

<400> 36
 Arg Thr Arg Gly Arg Thr Arg Gly Gly Cys Glu Lys Val Pro Ile
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 Asn Thr Ser Cys Asn Pro Thr Ala His Leu Val Asn Ser Ser Cys
 20 25 30
 Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Ser Ser Lys Gly Leu
 35 40 45
 Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly
 50 55 60
 Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val
 65 70 75
 Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro
 80 85 90
 Gln Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr
 95 100 105
 Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu
 110 115 120
 Thr Leu Val Gln Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His
 125 130 135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys	
				140					145					150	
Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe	
				155					160					165	
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn	
				170					175					180	
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn	
				185					190					195	
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu	
				200					205					210	
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser	
				215					220					225	
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe	
				230					235					240	
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser	
				245					250					255	
Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe	
				260					265					270	
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu	
				275					280					285	
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys	
				290					295					300	
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp	
				305					310					315	
Asn	Lys	Lys	Arg	Lys	Lys										
				320											

<210> 37
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 37
 tcgtgcccag gggctgatgt gc 22

<210> 38
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 38
 gtctttaccc agccccggga tgcg 24

<210> 39
 <211> 50

gccaccatgt ctttgatgga gagccccgag aaggatggct caggacaga 1250
 tcatttcac caggctctgg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccagaagc agctgcgagc caccagcag 1350
 accattgcca gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41
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 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu
 20 25 30
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val
 35 40 45
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr
 50 55 60
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile
 65 70 75
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp
 80 85 90
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn
 95 100 105
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys
 110 115 120
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg
 125 130 135
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly
 140 145 150
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val
 155 160 165
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg
 170 175 180
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly
 185 190 195
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser
 200 205 210
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr
 215 220 225
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr
 230 235 240
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

				245					250					255
Asn	Glu	Asp	Glu	Glu	Asn	Thr	Leu	Ser	Val	Asp	Cys	Thr	Arg	Ile
				260					265					270
Ser	Phe	Glu	Tyr	Asp	Leu	Arg	Leu	Val	Leu	Tyr	Gln	His	Trp	Ser
				275					280					285
Leu	His	Asp	Ser	Leu	Cys	Asn	Thr	Ser	Tyr	Thr	Ala	Ala	Arg	Phe
				290					295					300
Lys	Leu	Trp	Ser	Val	His	Gly	Gln	Lys	Arg	Leu	Gln	Glu	Phe	Leu
				305					310					315
Ala	Asp	Met	Gly	Leu	Pro	Leu	Lys	Gln	Val	Lys	Gln	Lys	Phe	Gln
				320					325					330
Ala	Met	Asp	Ile	Ser	Leu	Lys	Glu	Asn	Leu	Arg	Glu	Met	Ile	Glu
				335					340					345
Glu	Ser	Ala	Asn	Lys	Phe	Gly	Met	Lys	Asp	Met	Arg	Val	Gln	Thr
				350					355					360
Phe	Ser	Ile	His	Phe	Gly	Phe	Lys	His	Lys	Phe	Leu	Ala	Ser	Asp
				365					370					375
Val	Val	Phe	Ala	Thr	Met	Ser	Leu	Met	Glu	Ser	Pro	Glu	Lys	Asp
				380					385					390
Gly	Ser	Gly	Thr	Asp	His	Phe	Ile	Gln	Ala	Leu	Asp	Ser	Leu	Ser
				395					400					405
Arg	Ser	Asn	Leu	Asp	Lys	Leu	Tyr	His	Gly	Leu	Glu	Leu	Ala	Lys
				410					415					420
Lys	Gln	Leu	Arg	Ala	Thr	Gln	Gln	Thr	Ile	Ala	Ser	Cys	Leu	Cys
				425					430					435
Thr	Asn	Leu	Val	Ile	Ser	Gln	Gly	Pro	Phe	Leu	Tyr	Cys	Ser	Leu
				440					445					450
Met	Glu	Gly	Thr	Pro	Asp	Val	Met	Leu	Phe	Ser	Arg	Pro	Ala	Ser
				455					460					465
Leu	Ser	Leu	Leu	Ser	Lys	His	Leu	Leu	Lys	Ser	Phe	Val	Cys	Ser
				470					475					480
Thr	Lys	Asn	Arg	Arg	Cys	Lys	Leu	Leu	Pro	Leu	Val	Met	Ala	Ala
				485					490					495
Pro	Leu	Ser	Met	Glu	His	Gly	Thr	Val	Thr	Val	Val	Gly	Ile	Pro
				500					505					510
Pro	Glu	Thr	Asp	Ser	Ser	Asp	Arg	Lys	Asn	Phe	Phe	Gly	Arg	Ala
				515					520					525
Phe	Glu	Lys	Ala	Ala	Glu	Ser	Thr	Ser	Ser	Arg	Met	Leu	His	Asn
				530					535					540
His	Phe	Asp	Leu	Ser	Val	Ile	Glu	Leu	Lys	Ala	Glu	Asp	Arg	Ser
				545					550					555
Lys	Phe	Leu	Asp	Ala	Leu	Ile	Ser	Leu	Leu	Ser				

<210> 42
 <211> 380
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

<400> 42
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 ccgatttccg caaagagttc tacgaggtgg tccagagcca gagggtcctt 100
 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150
 ggccttggtc cagtgtgacc angtgcaata tangctgggt ccagtttctg 200
 ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250
 tattttattc tcataaactg tggagctaata gtagacctat tggatattct 300
 tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350
 tcaatgttgt caatgtatac aacgataccc 380

<210> 43
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 43
 ttccgcaaag agttctacga ggtgg 25

<210> 44
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 44
 attgacaaca ttgactggcc tatggg 26

<210> 45
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 45
 gtggatgctc tgtgtgctg caagatcctt caggccttgt tccagtgtga 50

<210> 46

<211> 3089
 <212> DNA
 <213> Homo sapiens

<400> 46
 caggaaccct ctctttgggt ctggattggg acccctttcc agtaccattt 50
 tttctagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100
 ggaaatagac tacagcccca attggctgac tttggctata gaaaaaagaa 150
 aggaacgaaa agagacagtt ttttttgaa agctaagtct tccctttatc 200
 gagtcaagaa accccccctt cttgagctat ttacagcttt taacaattga 250
 gtaaagtacg ctccggtcac catggtgaca gccgccctgg gtcccgtctg 300
 ggcagcgcctc ctgctctttc tctgatgtg tgagatccgt atggtggagc 350
 tcacctttga cagagctgtg gccagcgggt gccaacgggt ctgtgactct 400
 gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggccg 450
 cccccacgcc ctgcctgaga tcagacccta cattaatatc accatcctga 500
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 agggagggtc cccaagggga gcctggccct cagggcagca agggtgacaa 600
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 tctcagtggg ccgcaagacg gccctgcaca gggcgagga cttccagacg 700
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 cagaaagagg ctgtcatcct gtacgcgcag ccagcgcagc gcagcatcat 900
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taaagaatgc tgtctcctct tggaaaaaaa aaaaaaaaa 3089

<210> 47
<211> 259
<212> PRT
<213> Homo sapiens

<220>
<221> Signal Peptide
<222> 1-20
<223> Signal Peptide

<220>
<221> N-glycosylation Site
<222> 72-75
<223> N-glycosylation Site

<220>
<221> Clq Domain Proteins
<222> 144-178, 78-111, 84-117
<223> Clq Domain Proteins

<400> 47
Met Val Thr Ala Ala Leu Gly Pro Val Trp Ala Ala Leu Leu Leu
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Phe Leu Leu Met Cys Glu Ile Arg Met Val Glu Leu Thr Phe Asp
20 25 30
Arg Ala Val Ala Ser Gly Cys Gln Arg Cys Cys Asp Ser Glu Asp
35 40 45
Pro Leu Asp Pro Ala His Val Ser Ser Ala Ser Ser Ser Gly Arg
50 55 60
Pro His Ala Leu Pro Glu Ile Arg Pro Tyr Ile Asn Ile Thr Ile
65 70 75
Leu Lys Gly Asp Lys Gly Asp Pro Gly Pro Met Gly Leu Pro Gly
80 85 90
Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu Pro Gly Pro Gln Gly
95 100 105
Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro Gly Ala Pro Cys
110 115 120
Gln Lys Arg Phe Phe Ala Phe Ser Val Gly Arg Lys Thr Ala Leu
125 130 135
His Ser Gly Glu Asp Phe Gln Thr Leu Leu Phe Glu Arg Val Phe
140 145 150
Val Asn Leu Asp Gly Cys Phe Asp Met Ala Thr Gly Gln Phe Ala
155 160 165
Ala Pro Leu Arg Gly Ile Tyr Phe Phe Ser Leu Asn Val His Ser
170 175 180
Trp Asn Tyr Lys Glu Thr Tyr Val His Ile Met His Asn Gln Lys
185 190 195
Glu Ala Val Ile Leu Tyr Ala Gln Pro Ser Glu Arg Ser Ile Met

Gln Ser Gln Ser Val Met Leu Asp Leu Ala Tyr Gly Asp Arg Val
 215 220 225
 Trp Val Arg Leu Phe Lys Arg Gln Arg Glu Asn Ala Ile Tyr Ser
 230 235 240
 Asn Asp Phe Asp Thr Tyr Ile Thr Phe Ser Gly His Leu Ile Lys
 245 250 255
 Ala Glu Asp Asp

<210> 48
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 48
 ccagacgctg ctcttcgaaa gggtc 25

<210> 49
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 49
 ggtccccgta ggccaggtcc agc 23

<210> 50
 <211> 50
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 50
 ctacttcttc agcctcaatg tgcacagctg gaattacaag gagacgtacg 50

<210> 51
 <211> 2768
 <212> DNA
 <213> Homo sapiens

<400> 51
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 ccgcctcccg ggacagaaga tgtgctccag ggtccctctg ctgctgccgc 150
 tgctcctgct actggccctg gggcctgggg tgcagggctg cccatccggc 200
 tgccagtgcg gccagccaca gacagtcttc tgcaactgcc gccaggggac 250

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agaacggcat caccatgctc gacgcaggca gctttgccgg cctgccgggc 350
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 aaaagatgaa gtgtgaaa 2768

<210> 52
 <211> 673
 <212> PRT
 <213> Homo sapiens

<400> 52
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 20 25 30
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu

	410	415	420
His Leu Gly Thr	Arg His His Leu Ala	Cys Leu Cys Pro Glu	Gly
	425	430	435
Phe Thr Gly Leu	Tyr Cys Glu Ser Gln	Met Gly Gln Gly Thr	Arg
	440	445	450
Pro Ser Pro Thr	Pro Val Thr Pro Arg	Pro Pro Arg Ser Leu	Thr
	455	460	465
Leu Gly Ile Glu	Pro Val Ser Pro Thr	Ser Leu Arg Val Gly	Leu
	470	475	480
Gln Arg Tyr Leu	Gln Gly Ser Ser Val	Gln Leu Arg Ser Leu	Arg
	485	490	495
Leu Thr Tyr Arg	Asn Leu Ser Gly Pro	Asp Lys Arg Leu Val	Thr
	500	505	510
Leu Arg Leu Pro	Ala Ser Leu Ala Glu	Tyr Thr Val Thr Gln	Leu
	515	520	525
Arg Pro Asn Ala	Thr Tyr Ser Val Cys	Val Met Pro Leu Gly	Pro
	530	535	540
Gly Arg Val Pro	Glu Gly Glu Glu Ala	Cys Gly Glu Ala His	Thr
	545	550	555
Pro Pro Ala Val	His Ser Asn His Ala	Pro Val Thr Gln Ala	Arg
	560	565	570
Glu Gly Asn Leu	Pro Leu Leu Ile Ala	Pro Ala Leu Ala Ala	Val
	575	580	585
Leu Leu Ala Ala	Leu Ala Ala Val Gly	Ala Ala Tyr Cys Val	Arg
	590	595	600
Arg Gly Arg Ala	Met Ala Ala Ala Ala	Gln Asp Lys Gly Gln	Val
	605	610	615
Gly Pro Gly Ala	Gly Pro Leu Glu Leu	Glu Gly Val Lys Val	Pro
	620	625	630
Leu Glu Pro Gly	Pro Lys Ala Thr Glu	Gly Gly Gly Glu Ala	Leu
	635	640	645
Pro Ser Gly Ser	Glu Cys Glu Val Pro	Leu Met Gly Phe Pro	Gly
	650	655	660
Pro Gly Leu Gln	Ser Pro Leu His Ala	Lys Pro Tyr Ile	
	665	670	

<210> 53
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 53
 tcttcagccg cttgcgcaac etc 23

<210> 54
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 54
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<210> 55
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 55
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<210> 56
 <211> 3462
 <212> DNA
 <213> Homo sapiens

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 ttatgacagc agaggggtgat gctccagagc tgccagaaga aagggaactg 200
 atgaccaact gtcacaacat gtctctaaga aagggtcccg cagacttgac 250
 cccagccaca acgacactgg atttatccta taacctcctt tttcaactcc 300
 agagttcaga ttttcattct gtctccaaac tgagagtttt gattctatgc 350
 cataacagaa ttcaacagct ggatctcaaa acctttgaat tcaacaagga 400
 gttaagatat ttagatttgt ctaataacag actgaagagt gtaacttggt 450
 atttactggc aggtctcagg tatttagatc tttcttttaa tgactttgac 500
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 accaatggac acaaatttct gggttctttt gcgtgatgga atcaagactt 750
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tacgaaatto caatatttaa attttgccaa taatatctta acagacgagt 1200
tgttttaaag aactatccaa ctgcctcact tgaaaactct cattttgaat 1250
ggcaataaac tggagacact ttcttttagta agttgctttg ctaacaacac 1300
acccttgga cacttggaatc tgagtcaaaa tctattacaa cataaaaaatg 1350
atgaaaattg ctcatggcca gaaactgtgg tcaatatgaa tctgtcatac 1400
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tgatttgcct ttatgaaagc tactttgacc ctggcaaaag cattagtga 2150
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tcccaacttt gtccagaatg agtggtgcca ttatgaattc tactttgccc 2250
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gccaccagag aaatgtatga actgcagaca ttcacagagt taaatgaaga 2500

Thr Phe Glu Phe Asn Lys Glu Leu Arg Tyr Leu Asp Leu Ser Asn	95	100	105
Asn Arg Leu Lys Ser Val Thr Trp Tyr Leu Leu Ala Gly Leu Arg	110	115	120
Tyr Leu Asp Leu Ser Phe Asn Asp Phe Asp Thr Met Pro Ile Cys	125	130	135
Glu Glu Ala Gly Asn Met Ser His Leu Glu Ile Leu Gly Leu Ser	140	145	150
Gly Ala Lys Ile Gln Lys Ser Asp Phe Gln Lys Ile Ala His Leu	155	160	165
His Leu Asn Thr Val Phe Leu Gly Phe Arg Thr Leu Pro His Tyr	170	175	180
Glu Glu Gly Ser Leu Pro Ile Leu Asn Thr Thr Lys Leu His Ile	185	190	195
Val Leu Pro Met Asp Thr Asn Phe Trp Val Leu Leu Arg Asp Gly	200	205	210
Ile Lys Thr Ser Lys Ile Leu Glu Met Thr Asn Ile Asp Gly Lys	215	220	225
Ser Gln Phe Val Ser Tyr Glu Met Gln Arg Asn Leu Ser Leu Glu	230	235	240
Asn Ala Lys Thr Ser Val Leu Leu Leu Asn Lys Val Asp Leu Leu	245	250	255
Trp Asp Asp Leu Phe Leu Ile Leu Gln Phe Val Trp His Thr Ser	260	265	270
Val Glu His Phe Gln Ile Arg Asn Val Thr Phe Gly Gly Lys Ala	275	280	285
Tyr Leu Asp His Asn Ser Phe Asp Tyr Ser Asn Thr Val Met Arg	290	295	300
Thr Ile Lys Leu Glu His Val His Phe Arg Val Phe Tyr Ile Gln	305	310	315
Gln Asp Lys Ile Tyr Leu Leu Leu Thr Lys Met Asp Ile Glu Asn	320	325	330
Leu Thr Ile Ser Asn Ala Gln Met Pro His Met Leu Phe Pro Asn	335	340	345
Tyr Pro Thr Lys Phe Gln Tyr Leu Asn Phe Ala Asn Asn Ile Leu	350	355	360
Thr Asp Glu Leu Phe Lys Arg Thr Ile Gln Leu Pro His Leu Lys	365	370	375
Thr Leu Ile Leu Asn Gly Asn Lys Leu Glu Thr Leu Ser Leu Val	380	385	390
Ser Cys Phe Ala Asn Asn Thr Pro Leu Glu His Leu Asp Leu Ser	395	400	405

Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe
				725					730					735
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu
				740					745					750
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly
				755					760					765
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu
				770					775					780
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn
				785					790					795
Glu	Glu	Ser	Arg	Gly	Ser	Thr	Ile	Ser	Leu	Met	Arg	Thr	Asp	Cys
				800					805					810

Leu

<210> 58
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 58
 tcccaccagg tatcataaac tgaa 24

<210> 59
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 59
 ttatagacaa tctgtttctca tcagaga 27

<210> 60
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 60
 aaaaagcata cttggaatgg cccaaggata ggtgtaaag 40

<210> 61
 <211> 3772
 <212> DNA
 <213> Homo sapiens

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ccccccctgag cccgccccgc gcctctgcgc gccctgtcc gccccggccc 150
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 aaccttaaaa atcacagact tccagctcca tgccctcacg gtgaagcgct 800
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 cagtttggga agaattattg aattatcttg caagaaaaaa gtatgtctca 3650
 ctttttgta atgttgctgc ctcatcgacc tgggaaaaat gaaaaaaaaa 3700
 aataaagcaa atggtgaagac ccttaaaaaa aaaaaaaaaa aaaaaaaaaa 3750
 aaaaaaaaaa aaaaaaaaaa aa 3772

<210> 62
 <211> 756
 <212> PRT
 <213> Homo sapiens

<400> 62
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 20 25 30
 Glu Asp Pro Asp Tyr Tyr Gly Gln Glu Ile Trp Ser Arg Glu Pro
 35 40 45
 Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro
 50 55 60
 Leu Pro Ala Gly Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu
 65 70 75
 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys
 80 85 90
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Gly Lys His Ser
 95 100 105
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn
 110 115 120
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser
 125 130 135
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln
 140 145 150
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg
 155 160 165
 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr
 170 175 180
 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

				185					190					195
Glu	Val	Asp	Ala	Arg 200	Arg	Leu	Thr	Arg	Phe 205	Thr	Gly	Val	Ile	Thr 210
Gln	Gly	Arg	Asn	Ser 215	Leu	Trp	Leu	Ser	Asp 220	Trp	Val	Thr	Ser	Tyr 225
Lys	Val	Met	Val	Ser 230	Asn	Asp	Ser	His	Thr 235	Trp	Val	Thr	Val	Lys 240
Asn	Gly	Ser	Gly	Asp 245	Met	Ile	Phe	Glu	Gly 250	Asn	Ser	Glu	Lys	Glu 255
Ile	Pro	Val	Leu	Asn 260	Glu	Leu	Pro	Val	Pro 265	Met	Val	Ala	Arg	Tyr 270
Ile	Arg	Ile	Asn	Pro 275	Gln	Ser	Trp	Phe	Asp 280	Asn	Gly	Ser	Ile	Cys 285
Met	Arg	Met	Glu	Ile 290	Leu	Gly	Cys	Pro	Leu 295	Pro	Asp	Pro	Asn	Asn 300
Tyr	Tyr	His	Arg	Arg 305	Asn	Glu	Met	Thr	Thr 310	Thr	Asp	Asp	Leu	Asp 315
Phe	Lys	His	His	Asn 320	Tyr	Lys	Glu	Met	Arg 325	Gln	Leu	Met	Lys	Val 330
Val	Asn	Glu	Met	Cys 335	Pro	Asn	Ile	Thr	Arg 340	Ile	Tyr	Asn	Ile	Gly 345
Lys	Ser	His	Gln	Gly 350	Leu	Lys	Leu	Tyr	Ala 355	Val	Glu	Ile	Ser	Asp 360
His	Pro	Gly	Glu	His 365	Glu	Val	Gly	Glu	Pro 370	Glu	Phe	His	Tyr	Ile 375
Ala	Gly	Ala	His	Gly 380	Asn	Glu	Val	Leu	Gly 385	Arg	Glu	Leu	Leu	Leu 390
Leu	Leu	Val	Gln	Phe 395	Val	Cys	Gln	Glu	Tyr 400	Leu	Ala	Arg	Asn	Ala 405
Arg	Ile	Val	His	Leu 410	Val	Glu	Glu	Thr	Arg 415	Ile	His	Val	Leu	Pro 420
Ser	Leu	Asn	Pro	Asp 425	Gly	Tyr	Glu	Lys	Ala 430	Tyr	Glu	Gly	Gly	Ser 435
Glu	Leu	Gly	Gly	Trp 440	Ser	Leu	Gly	Arg	Trp 445	Thr	His	Asp	Gly	Ile 450
Asp	Ile	Asn	Asn	Asn 455	Phe	Pro	Asp	Leu	Asn 460	Thr	Leu	Leu	Trp	Glu 465
Ala	Glu	Asp	Arg	Gln 470	Asn	Val	Pro	Arg	Lys 475	Val	Pro	Asn	His	Tyr 480
Ile	Ala	Ile	Pro	Glu 485	Trp	Phe	Leu	Ser	Glu 490	Asn	Ala	Thr	Val	Ala 495
Ala	Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp	Met	Glu	Lys	Ile	Pro	Phe

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Val Leu Gly Gly	Asn Leu Gln Gly Gly	Glu Leu Val Val Ala	Tyr
	515	520	525
Pro Tyr Asp Leu	Val Arg Ser Pro Trp	Lys Thr Gln Glu His	Thr
	530	535	540
Pro Thr Pro Asp	Asp His Val Phe Arg	Trp Leu Ala Tyr Ser	Tyr
	545	550	555
Ala Ser Thr His	Arg Leu Met Thr Asp	Ala Arg Arg Arg Val	Cys
	560	565	570
His Thr Glu Asp	Phe Gln Lys Glu Glu	Gly Thr Val Asn Gly	Ala
	575	580	585
Ser Trp His Thr	Val Ala Gly Ser Leu	Asn Asp Phe Ser Tyr	Leu
	590	595	600
His Thr Asn Cys	Phe Glu Leu Ser Ile	Tyr Val Gly Cys Asp	Lys
	605	610	615
Tyr Pro His Glu	Ser Gln Leu Pro Glu	Glu Trp Glu Asn Asn	Arg
	620	625	630
Glu Ser Leu Ile	Val Phe Met Glu Gln	Val His Arg Gly Ile	Lys
	635	640	645
Gly Leu Val Arg	Asp Ser His Gly Lys	Gly Ile Pro Asn Ala	Ile
	650	655	660
Ile Ser Val Glu	Gly Ile Asn His Asp	Ile Arg Thr Ala Asn	Asp
	665	670	675
Gly Asp Tyr Trp	Arg Leu Leu Asn Pro	Gly Glu Tyr Val Val	Thr
	680	685	690
Ala Lys Ala Glu	Gly Phe Thr Ala Ser	Thr Lys Asn Cys Met	Val
	695	700	705
Gly Tyr Asp Met	Gly Ala Thr Arg Cys	Asp Phe Thr Leu Ser	Lys
	710	715	720
Thr Asn Met Ala	Arg Ile Arg Glu Ile	Met Glu Lys Phe Gly	Lys
	725	730	735
Gln Pro Val Ser	Leu Pro Ala Arg Arg	Leu Lys Leu Arg Gly	Arg
	740	745	750
Lys Arg Arg Gln	Arg Gly		
	755		

<210> 63
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 63
 gttctcaatg agctaccogt cccc 24

Table 1. Demographic characteristics of the study population	
Age (years)	65.0 ± 10.0
Gender	
Male	50.0%
Female	50.0%
Education (years)	12.0 ± 2.0
Income (USD/month)	1,200 ± 300
Marital status	
Married	60.0%
Single	40.0%
Health status	
Good	70.0%
Fair	30.0%
Chronic diseases	
Hypertension	35.0%
Diabetes	20.0%
Heart disease	15.0%
Stroke	10.0%
Arthritis	25.0%
Chronic kidney disease	5.0%
Chronic lung disease	8.0%
Chronic liver disease	3.0%
Chronic mental health	12.0%
Chronic pain	18.0%
Chronic fatigue	10.0%
Chronic insomnia	15.0%
Chronic depression	10.0%
Chronic anxiety	12.0%
Chronic stress	15.0%
Chronic worry	18.0%
Chronic anger	10.0%
Chronic sadness	12.0%
Chronic loneliness	15.0%
Chronic isolation	10.0%
Chronic social withdrawal	12.0%
Chronic lack of interest	15.0%
Chronic loss of pleasure	10.0%
Chronic loss of energy	12.0%
Chronic loss of motivation	15.0%
Chronic loss of focus	10.0%
Chronic loss of memory	12.0%
Chronic loss of concentration	15.0%
Chronic loss of attention	10.0%
Chronic loss of awareness	12.0%
Chronic loss of insight	15.0%
Chronic loss of judgment	10.0%
Chronic loss of reasoning	12.0%
Chronic loss of understanding	15.0%
Chronic loss of knowledge	10.0%
Chronic loss of skills	12.0%
Chronic loss of abilities	15.0%
Chronic loss of talents	10.0%
Chronic loss of gifts	12.0%
Chronic loss of potential	15.0%
Chronic loss of future	10.0%
Chronic loss of hope	12.0%
Chronic loss of faith	15.0%
Chronic loss of belief	10.0%
Chronic loss of trust	12.0%
Chronic loss of respect	15.0%
Chronic loss of honor	10.0%
Chronic loss of dignity	12.0%
Chronic loss of pride	15.0%
Chronic loss of self-esteem	10.0%
Chronic loss of self-worth	12.0%
Chronic loss of self-respect	15.0%
Chronic loss of self-dignity	10.0%
Chronic loss of self-honor	12.0%
Chronic loss of self-pride	15.0%
Chronic loss of self-worth	10.0%
Chronic loss of self-respect	12.0%
Chronic loss of self-dignity	15.0%
Chronic loss of self-honor	10.0%
Chronic loss of self-pride	12.0%
Chronic loss of self-worth	15.0%
Chronic loss of self-respect	10.0%
Chronic loss of self-dignity	12.0%
Chronic loss of self-honor	15.0%
Chronic loss of self-pride	10.0%
Chronic loss of self-worth	12.0%
Chronic loss of self-respect	15.0%
Chronic loss of self-dignity	10.0%
Chronic loss of self-honor	12.0%
Chronic loss of self-pride	15.0%
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Chronic loss of self-worth	15.0%
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Chronic loss of self-honor	15.0%
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Chronic loss of self-respect	15.0%
Chronic loss of self-dignity	10.0%
Chronic loss of self-honor	12.0%
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Chronic loss of self-worth	10.0%
Chronic loss of self-respect	12.0%
Chronic loss of self-dignity	15.0%
Chronic loss of self-honor	10.0%
Chronic loss of self-pride	12.0%
Chronic loss of self-worth	15.0%
Chronic loss of self-respect	10.0%
Chronic loss of self-dignity	12.0%
Chronic loss of self-honor	15.0%
Chronic loss of self-pride	10.0%
Chronic loss of self-worth	12.0%
Chronic loss of self-respect	15.0%
Chronic loss of self-dignity	10.0%
Chronic loss of self-honor	12.0%
Chronic loss of self-pride	15.0%
Chronic loss of self-worth	10.0%
Chronic loss of self-respect	12.0%
Chronic loss of self-dignity	15.0%
Chronic loss of self-honor	10.0%
Chronic loss of self-pride	12.0%
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Chronic loss of self-dignity	10.0%
Chronic loss of self-honor	12.0%
Chronic loss of self-pride	15.0%
Chronic loss of self-worth	10.0%
Chronic loss of self-respect	12.0%
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Chronic loss of self-honor	10.0%
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Chronic loss of self-worth	15.0%
Chronic loss of self-respect	10.0%
Chronic loss of self-dignity	12.0%
Chronic loss of self-honor	15.0%
Chronic loss of self-pride	10.0%
Chronic loss of self-worth	12.0%
Chronic loss of self-respect	15.0%
Chronic loss of self-dignity	10.0%
Chronic loss of self-honor	1

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<220>
<223> Synthetic oligonucleotide probe

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<211> 2854
<212> DNA
<213> Homo sapiens
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 gaatattgcc agagttaacc tgaccaccaa cacgattgct gtgactcaaa 1100
 ctctccctaa tgctgcctat aataaccgct tttcatatgc taatgttgct 1150
 tggcaagata ttgactttgc tgtggatgag aatggattgt gggttattta 1200
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aaaa 2854

<210> 67
<211> 510
<212> PRT
<213> Homo sapiens

<400> 67
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35 40 45
Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu
50 55 60
Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly
65 70 75
Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro
80 85 90
Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr
95 100 105
Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val
110 115 120
Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu
125 130 135
Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser
140 145 150
Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu
155 160 165
Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser
170 175 180
Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr
185 190 195
Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu
200 205 210

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Cys	Glu	Ala	Ser	Lys	Asp	Gln	Asn	Thr	Pro	Val	Val	His	Pro	Pro	
				230					235					240	
Pro	Thr	Pro	Gly	Ser	Cys	Gly	His	Gly	Gly	Val	Val	Asn	Ile	Ser	
				245					250					255	
Lys	Pro	Ser	Val	Val	Gln	Leu	Asn	Trp	Arg	Gly	Phe	Ser	Tyr	Leu	
				260					265					270	
Tyr	Gly	Ala	Trp	Gly	Arg	Asp	Tyr	Ser	Pro	Gln	His	Pro	Asn	Lys	
				275					280					285	
Gly	Leu	Tyr	Trp	Val	Ala	Pro	Leu	Asn	Thr	Asp	Gly	Arg	Leu	Leu	
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Glu	Tyr	Tyr	Arg	Leu	Tyr	Asn	Thr	Leu	Asp	Asp	Leu	Leu	Leu	Tyr	
				305					310					315	
Ile	Asn	Ala	Arg	Glu	Leu	Arg	Ile	Thr	Tyr	Gly	Gln	Gly	Ser	Gly	
				320					325					330	
Thr	Ala	Val	Tyr	Asn	Asn	Asn	Met	Tyr	Val	Asn	Met	Tyr	Asn	Thr	
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Gly	Asn	Ile	Ala	Arg	Val	Asn	Leu	Thr	Thr	Asn	Thr	Ile	Ala	Val	
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Thr	Gln	Thr	Leu	Pro	Asn	Ala	Ala	Tyr	Asn	Asn	Arg	Phe	Ser	Tyr	
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Ala	Asn	Val	Ala	Trp	Gln	Asp	Ile	Asp	Phe	Ala	Val	Asp	Glu	Asn	
				380					385					390	
Gly	Leu	Trp	Val	Ile	Tyr	Ser	Thr	Glu	Ala	Ser	Thr	Gly	Asn	Met	
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Val	Ile	Ser	Lys	Leu	Asn	Asp	Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr	
				410					415					420	
Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro	Ser	Ala	Ser	Asn	Ala	Phe	Met	
				425					430					435	
Val	Cys	Gly	Val	Leu	Tyr	Ala	Thr	Arg	Thr	Met	Asn	Thr	Arg	Thr	
				440					445					450	
Glu	Glu	Ile	Phe	Tyr	Tyr	Tyr	Asp	Thr	Asn	Thr	Gly	Lys	Glu	Gly	
				455					460					465	
Lys	Leu	Asp	Ile	Val	Met	His	Lys	Met	Gln	Glu	Lys	Val	Gln	Ser	
				470					475					480	
Ile	Asn	Tyr	Asn	Pro	Phe	Asp	Gln	Lys	Leu	Tyr	Val	Tyr	Asn	Asp	
				485					490					495	
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<210> 68
 <211> 410
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

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 gtattataga ctgtacaacc cactggatga ttgtctattg tatataaatg 300
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<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtgggc atgggtggtgt ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

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<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

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<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72

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 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73

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Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe	35	40	45	
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly	50	55	60	
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu	65	70	75	
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val	80	85	90	
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser	95	100	105	
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala	110	115	120	
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala	125	130	135	
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr	140	145	150	
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu	155	160	165	
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu	170	175	180	
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr	185	190	195	
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu	200	205	210	
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser	215	220	225	
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys	230	235	240	
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser	245	250	255	
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr	260	265	270	
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr	275	280	285	

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Ser	Thr	Val	Pro	Lys	Glu	Gly	Gln	Ser	Val	Gln	Trp	Trp	His	Ala	
				305					310					315	
Gln	Gly	Ile	Ile	Gly	Leu	Ile	Leu	Phe	Leu	Leu	Cys	Val	Phe	Tyr	
				320					325					330	
Ser	Ser	Ile	Arg	Thr	Ser	Asn	Asn	Ser	Gln	Val	Asn	Lys	Leu	Thr	
				335					340					345	
Leu	Thr	Ser	Asp	Glu	Ser	Thr	Leu	Ile	Glu	Asp	Gly	Gly	Ala	Arg	
				350					355					360	
Ser	Asp	Gly	Ser	Leu	Glu	Asp	Gly	Asp	Asp	Val	His	Arg	Ala	Val	
				365					370					375	
Asp	Asn	Glu	Arg	Asp	Gly	Val	Thr	Tyr	Ser	Tyr	Ser	Phe	Phe	His	
				380					385					390	
Phe	Met	Leu	Phe	Leu	Ala	Ser	Leu	Tyr	Ile	Met	Met	Thr	Leu	Thr	
				395					400					405	
Asn	Trp	Ser	Arg	Tyr	Glu	Pro	Ser	Arg	Glu	Met	Lys	Ser	Gln	Trp	
				410					415					420	
Thr	Ala	Val	Trp	Val	Lys	Ile	Ser	Ser	Ser	Trp	Ile	Gly	Ile	Val	
				425					430					435	
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 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

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 ataccatggt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150
 tagtggaac aantccactg taactagatt gatctatgca cttttcttgc 200
 ttgttgagat atgtgtagct tgtgtaatgt tgataaccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaag gtgttgctcc 300
 ttgtaacatt ttggttggt ataaagctgt atatcgtttg tgctttggtt 350
 tggctatggt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

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tgctgcagca attgcaatta ttattggggc 480

<210> 75
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base

<400> 75
gttattgtga actttgtgga gatgggaggt cntggggctg tgttccatgg 50
cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgccga 100
tgctgtccta gtggaacaa ntccactgta attagattga tntatgcact 150
ttntttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250
gttgccctt gtaacatttt ggttggtat aaagctgtat atngtttgtg 300
ctttggtttg gctangttct atnttcttct ctctttacta atgatcaaag 350
tgaagagtag cagtgatcct agagctgcag tgcacaatgg attttggttt 400
tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
aagaagctgt ctccatcttg tctgtatccg ctgctcttgt gaacgttntg 50
gagatgggga gcgtccttgg ggttggtgctc catggcgagc tggataccat 100
gtttgtgtgg aagtgtcccg tgtttgctat gccgatgctg tcctagtggg 150
aacaactcca ctgtaactag attgatctat gcacttttct tgcttggttg 200
agtatgtgta gcttggtgtaa tggatgatac aggaatggaa gaacaactga 250
ataagattcc tggattttgt gagaatgaga aagggtgttg cccttgtaac 300
attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggtat 350
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagtg 400
atcctagagc tgcagtgcac aatggatttt ggttctttta atttgctgca 450
gcaattgcaa ttattatttg ggc 473

<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
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actttttcct tgcttggttg agtatgtgta gctttgtgta atgttggtcc 100
caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150
gaaaggtggt gtccccttgt aacatttttg gttggctata aagctgtata 200
tcgtttgtgc tttggtttg ctatgttcta tcttcttctc tctttactaa 250
tgatcaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
ttttggttct ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350
cttcattcca gaaggaactt ttacaactgt gtggttttat gtaggcattg 400
cagggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatttt 450
gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaactc 500
gagatggttg tatgcagcct tggtatcagc tacagctctg aattatctgc 550
tgtctttagt tgctatcgtc ctgttctttg tctactacac tcatccagcc 600
agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650
tggtgcttct gtaatg 666

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 78
atgtttgtgt ggaagtgcc cg 22

<210> 79
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 79
gtcaacatgc tcctctgc 18

<210> 80
<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 80
aatccattgt gcactgcagc tctagg 26

<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
gagcatgccca ccactgggact gac 23

<210> 82
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 82
gccgatgctg tcctagtggg aacaactcca ctgtaactag attgatctat 50
gcac 54

<210> 83
<211> 3906
<212> DNA
<213> Homo sapiens

<400> 83
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cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc ggggcgagtc 150
ctgtgaaagc agataaaaga aaacatttat taacgtgtca ttacgagggg 200
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tttgatttat tagcgatgcc ccttggtttg tgtgttacgc acacacacgt 400
gcacacaagg ctctggctcg cttccctccc tcgtttccag ctctgggcg 450
aatccacat ctgtttcaac tctccgccga gggcgagcag gagcgagagt 500
gtgtcgaatc tgcgagtga gagggacgag ggaaaagaaa caaagccaca 550
gacgcaactt gagactcccc catccccaaa gaagcaccag atcagcaaaa 600

aaagaagatg ggccccccga gcctcgtgct gtgcttgctg tccgcaactg 650
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tttacatgta atcaacatgg gaacttttag gggaacctaa taagaaatcc 3850
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 gaaaaa 3906

<210> 84
 <211> 867
 <212> PRT
 <213> Homo sapiens

<400> 84
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 20 25 30
 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn
 35 40 45
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser
 50 55 60
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly
 65 70 75
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro
 80 85 90
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn
 95 100 105
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala
 110 115 120
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly
 125 130 135
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly
 140 145 150
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys
 155 160 165
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys
 170 175 180
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu
 185 190 195
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met
 200 205 210
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro
 215 220 225
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro
 230 235 240
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn
 245 250 255

Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro	
				260					265					270	
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln	
				275					280					285	
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met	
				290					295					300	
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr	
				305					310					315	
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly	
				320					325					330	
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val	
				335					340					345	
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val	
				350					355					360	
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu	
				365					370					375	
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu	
				380					385					390	
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met	
				395					400					405	
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu	
				410					415					420	
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe	
				425					430					435	
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu	
				440					445					450	
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val	
				455					460					465	
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro	
				470					475					480	
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys	
				485					490					495	
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp	
				500					505					510	
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys	
				515					520					525	
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val	
				530					535					540	
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp	
				545					550					555	
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala	
				560					565					570	

Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr	
				575					580					585	
Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr	
				590					595					600	
His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu	
				605					610					615	
Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His	
				620					625					630	
Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu	
				635					640					645	
Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys	
				650					655					660	
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu	
				665					670					675	
Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln	
				680					685					690	
Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys	
				695					700					705	
Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys	
				710					715					720	
Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp	
				725					730					735	
Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr	
				740					745					750	
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu	
				755					760					765	
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu	
				770					775					780	
Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val	
				785					790					795	
Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu	
				800					805					810	
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg	
				815					820					825	
Thr	Arg	Asn	Met	Asp	Leu	Asp	Gly	Gly	Ser	Tyr	Glu	Gln	Tyr	Arg	
				830					835					840	
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser	
				845					850					855	
Lys	Ser	Leu	Gly	Gln	Leu	Trp	Glu	Gly	Trp	Glu	Gly				
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<210> 85
 <211> 19
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 85
gaagccggct gtctgaatc 19

<210> 86
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 86
ggccagctat ctccgcag 18

<210> 87
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 87
aagggcctgc aagagaag 18

<210> 88
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 88
cactgggaca actgtggg 18

<210> 89
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 89
cagaggcaac gtggagag 18

<210> 90
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 90
aagtattgtc atacagtgtt c 21

<210> 91
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 91
 tagtacttgg gcacgaggtt ggag 24

<210> 92
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 92
 tcataccaac tgctgggtcat tggc 24

<210> 93
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 93
 ctcaagctgc tggacacgga gcggccggtg aatcggtttc acttg 45

<210> 94
 <211> 971
 <212> DNA
 <213> Homo sapiens

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 aaggagtgag gagctgctgg gcagagaggg actgtccggc tcccagatgc 100
 tgggcctcct ggggagcaca gccctcgtgg gatggatcac aggtgctgct 150
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atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650
 gtgctgaagg gtttggggag tggagagcaa ggggtgctctt tcggggctgg 700
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 gtgtcttggc agagccagca cacaagtgga tgtgaagtgc ccgtcttgac 800
 ctctcatca ggctgctgca ggcctctggc gggcagggca ctgggagagg 850
 ccctgagaat gtccttttgg tttggagaag gcagtgtgag gctgcacagt 900
 caattcatcg gtgccttagt ccaagaaaat aaaaaccact aagaagcttt 950
 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
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 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Leu Ala Thr
 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 96
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 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150
 aagtgagtgc tgggtcacc cccatccgca acgtcactgt ggcctacaag 200
 ttccacatgg ggctctatgg tgagactggg cggtttttca ctgagagctg 250
 cagcatctct cccaagctcc gctccatgc tgtctactat gacaaccccc 300

acatggtgcc ccctgataag tgccgatgtg ccgtgggcag catcctgagt 350
 gaaggtgagg aatcgccctc ccctgagctc atcgacctct accagaaatt 400
 tggcttcaag gtgttctcct tcccgccacc cagccatgtg gtgacagcca 450
 ccttccccta caccaccatt ctgtccatct ggctggctac ccgccgtgtc 500
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 acctgacttc ccctgctcca ggcctcttgc taagccttct cctcactgcc 1150
 ctttaggctc ccagggccag aggagccagg gactattttc tgcaccagcc 1200
 cccagggctg ccgcccctgt tgtgtctttt tttcagactc acagtggagc 1250
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 aaaaaaaaaa aa 1312

<210> 97
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 97
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 Leu Leu Leu Leu Thr Leu Leu Ala Phe Ala Gly Tyr Ser Gly Leu
 20 25 30
 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn
 35 40 45
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr
 50 55 60
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg
 65 70 75

Ser Ile Ala Val Tyr Tyr Asp Asn Pro His Met Val Pro Pro Asp
80 85 90

Lys Cys Arg Cys Ala Val Gly Ser Ile Leu Ser Glu Gly Glu Glu
95 100 105

Ser Pro Ser Pro Glu Leu Ile Asp Leu Tyr Gln Lys Phe Gly Phe
110 115 120

Lys Val Phe Ser Phe Pro Ala Pro Ser His Val Val Thr Ala Thr
125 130 135

Phe Pro Tyr Thr Thr Ile Leu Ser Ile Trp Leu Ala Thr Arg Arg
140 145 150

Val His Pro Ala Leu Asp Thr Tyr Ile Lys Glu Arg Lys Leu Cys
155 160 165

Ala Tyr Pro Arg Leu Glu Ile Tyr Gln Glu Asp Gln Ile His Phe
170 175 180

Met Cys Pro Leu Ala Arg Gln Gly Asp Phe Tyr Val Pro Glu Met
185 190 195

Lys Glu Thr Glu Trp Lys Trp Arg Gly Leu Val Glu Ala Ile Asp
200 205 210

Thr Gln Val Asp Gly Thr Gly Ala Asp Thr Met Ser Asp Thr Ser
215 220 225

Ser Val Ser Leu Glu Val Ser Pro Gly Ser Arg Glu Thr Ser Ala
230 235 240

Ala Thr Leu Ser Pro Gly Ala Ser Ser Arg Gly Trp Asp Asp Gly
245 250 255

Asp Thr Arg Ser Glu His Ser Tyr Ser Glu Ser Gly Ala Ser Gly
260 265 270

Ser Ser Phe Glu Glu Leu Asp Leu Glu Gly Glu Gly Pro Leu Gly
275 280 285

Glu Ser Arg Leu Asp Pro Gly Thr Glu Pro Leu Gly Thr Thr Lys
290 295 300

Trp Leu Trp Glu Pro Thr Ala Pro Glu Lys Gly Lys Glu
305 310

<210> 98
<211> 725
<212> DNA
<213> Homo sapiens

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ccccggctcc ctgccccgcg ccagtcatg accctgcgcc cctcactcct 100
cccgctccat ctgctgctgc tgctgctgct cagtgcggcg gtgtgccggg 150
ctgaggctgg gctcgaaacc gaaagtcccg tccggaccct ccaagtggag 200
accctggtgg agccccaga accatgtgcc gagcccgtg cttttggaga 250

ggtgccagcc ctccctgggcc tcattgggta tcacctatac agaaaggcca 450
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaaacaag 500
 agcaaaaaga aataataaat aataaatttt aaaaaactta aaa 543

<210> 102
 <211> 1316
 <212> DNA
 <213> Homo sapiens

<400> 102
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 aaatcggggg agtgaggcgg gccggcgagg cgcgacaccg ggctccggaa 100
 ccactgcacg acggggctgg actgaacctga aaaaaatgtc tggatttcta 150
 gagggcttga gatgctcaga atgcattgac tggggggaaa agcgcaatac 200
 tattgcttcc attgctgctg gtgtactatt ttttacaggc tgggtggatta 250
 tcatagatgc agctgttatt tatcccaacca tgaaagattt caaccactca 300
 taccatgcct gtggtgttat agcaaccata gccttcctaa tgattaatgc 350
 agtatcgaat ggacaagtcc gaggtgatag ttacagtga ggttgtctgg 400
 gtcaaacagg tgctcgcatt tggcttttgc ttggtttcat gttggccttt 450
 ggatctctga ttgcatctat gtggattcct tttggagggt atgttgctaa 500
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550
 tcatcttttt tggagggtg gtttttaagt ttggcgcac tgaagactta 600
 tggcagtga cacatctgat tcccacagc acaacagccc tgcattgggt 650
 tgtttgtttt tttactgctc actcccaacc ttttgtaatg ccattttcta 700
 aacttatttc tgagtgtagt ctgagcttaa agttgtgtaa tactaaaatc 750
 acgagaacac ctaaacaaca accaaaaatc tattgtggta tgcacttgat 800
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 ttttatcatg gtataatttg taaaaataaa aagaaattac aaaagaaatt 900
 atggatttgt caatgtaagt atttgtcata totgagggtcc aaaaccacaa 950
 tgaaagtgct ctgaagattt aatgtgttta ttcaaagtgt gtctcttctg 1000
 tgtcaaagt taaatgaaat ataaacattt tttagttttt aaaatattcc 1050
 gtggtcaaaa ttcttcctca ctataattgg tatttacttt taccaaaaat 1100
 tctgtgaaca tgtaatgtaa ctggcttttg aggtctccc aaggggtgag 1150
 tggacgtgtt ggaagagaga agcaccatgg tccagccacc aggtccctg 1200
 tgtcccttcc atgggaaggt cttccgctgt gcctctcatt ccaagggcag 1250
 gaagatgtga ctgagccatg acacgtggtt ctggtgggat gcacagtcac 1300

tccacatcca ccactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

Met Ser Gly Phe Leu Glu Gly Leu Arg Cys Ser Glu Cys Ile Asp
1 5 10 15
Trp Gly Glu Lys Arg Asn Thr Ile Ala Ser Ile Ala Ala Gly Val
20 25 30
Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile
35 40 45
Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly
50 55 60
Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn
65 70 75
Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln
80 85 90
Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe
95 100 105
Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val
110 115 120
Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe
125 130 135
Gln Asn Ala Phe Ile Phe Phe Gly Gly Leu Val Phe Lys Phe Gly
140 145 150
Arg Thr Glu Asp Leu Trp Gln
155

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

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tggttttcta gagggcttga gatgctcaga atgcattgac tggggggaaa 150
agcgcaatac tattgcttcc attgctgctg gtgtactatt ttttacaggc 200
tggttgatta tcatagatgc agctgttatt tatccaccca tgaaagattt 250
caaccactca taccatgocg gtggtgttat agcaaccata gccttcctaa 300
tgattaatgc agtatcgaat ggacaagtcc gaggtgatag ttacagtga 350
ggttgtctgg gtcaaacagg tgctcgcat tggcttttcg ttggtttcat 400

gttgccttt ggatctctga ttgcatctat gtggattcct tttggagggt 450
 atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatctttc 500
 cagaatgcct tcatcttttt tggagggctg gtttttaagt ttggc 545

<210> 105
 <211> 490
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 31, 39, 108, 145, 179, 219, 412, 479
 <223> unknown base

<400> 105
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 agaatgcatg actgggggaa aagcgcaaat actattgctt ccattgctgc 100
 tgggtgtaata ttttttacag gctggtggat tatcatagat gcagntgtta 150
 tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
 atagcaacca tagccttcnt aatgattaat gcagtatcga atggacaagt 250
 ccgaggtgat agttacagt aaggttggtt gggtaaaca ggtgctcgca 300
 tttggctttt cgttggtttc atgttggcct ttggatctct gattgcatct 350
 atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 400
 ccctggaatt gntgtatttt tccagaatgc cttcatcttt tttggagggc 450
 tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106
 <211> 466
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449
 <223> unknown base

<400> 106
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 aatgtttgga ttttttagagg gcttgagatg ntcagaatgc attgactggg 100
 ggaaaagcgc aatantattg ctttccattg ctgctggtgt actatctttt 150
 acaggttggt ggattatcat agatgcagct gttatctatc ccaccatgaa 200
 agatttnaac cactcatacc atgcctgtgg tggtatagca accatagcct 250
 tcctaataat taatgcagta tcgaatggac aagtcaggag tgatagttac 300
 agtgaagggt gtttgggtca aacaggtgnt cgcatttggc ttttcgttgg 350
 tttcatgttg gcctttggat ttctgattgn attctatgcg gattcttctt 400

ggagggttatg ttgctaaaga aaaagacata gtataccctg gaattnctnt 450
atttttccag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

tagagggtt gagatgctca gaatgcattg actgggggga aaagcgcaat 50

antattgctt ccattgntgn tgggtgnta tttttttaca ggctgggtgga 100

ttatnataga tgcagctgtt atttatccca ccatgaaaga tttnaaccan 150

tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200

tgcagtatng aatggacaag tccgagggtga tagttacagt gaagggttgtt 250

tgggtcaaac aggtgntngc atttggtttt tngttggttt catgttggcc 300

tttgatctn tgattgcatt tatgtggatt ntttttggag gttatgttgc 350

taaagnaanaa gacatagtat accctgt 377

<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

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ggcccgggcgc ggcngacac cgggttccgg gaaccattgc acgacggggt 100

ggactgacct gaaaaaatg tttggatttn tagagggtt gagatgctca 150

gaatgcattg actgggggga aaagcgcaat actattgctt ccattgctgc 200

tgggtgtacta ttttttacag gctggtggat tatcatagat gcagctgtta 250

tttatccac catgaaagat ttcaaccact cataccatgc ctgtggtgtt 300

atagcaacca tagccttctt aatgattaat gcagtatcga atggacaagt 350

ccgagggtgat agttacagtg aagggtgtct ggggtcaaaca ggtgctcgca 400

tttggtttt cgttggtttc atgttggcct ttggatntct gattgcatct 450

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ccctggaatt gctgtatttt tccagaatgc cttcatnttt tttggagggc 550

tg 552

<210> 109
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 109
gggtggatgg tactgctgca tcc 23

<210> 110
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 110
tggtgtgctg tgggaaatca gatgtg 26

<210> 111
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 111
gtgtctggag gctgtggccg ttttgttttc ttgggctaaa atcggg 46

<210> 112
<211> 3004
<212> DNA
<213> Homo sapiens

<400> 112
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ccgaatcctt tctccgaaga tgtcaaacgg cccccagcgc ccctggtaac 150
tgacaaggag gccaggaaga aggttctcaa acaagctttt tcagccaacc 200
aagtgccgga gaagctggat gtggtggtaa ttggcagtgg ctttgggggc 250
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 aaaa 3004

<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
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 20 25 30
 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val
 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile	
				110					115					120	
His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile	
				125					130					135	
Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser	
				140					145					150	
Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys	
				155					160					165	
Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu	
				170					175					180	
Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile	
				185					190					195	
Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu	
				200					205					210	
Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys	
				215					220					225	
Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln	
				230					235					240	
Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu	
				245					250					255	
Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro	
				260					265					270	
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr	
				275					280					285	
Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala	
				290					295					300	
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu	
				305					310					315	
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys	
				320					325					330	
Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile	
				335					340					345	
Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr	
				350					355					360	
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys	
				365					370					375	
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val	
				380					385					390	
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser	
				395					400					405	
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met	
				410					415					420	

Glu Arg Tyr Val	Ser Met Pro Arg Glu	Glu Ala Ala Glu His	Ile
425		430	435
Pro Leu Leu Phe	Phe Ala Phe Pro Ser	Ala Lys Asp Pro Thr	Trp
440		445	450
Glu Asp Arg Phe	Pro Gly Arg Ser Thr	Met Ile Met Leu Ile	Pro
455		460	465
Thr Ala Tyr Glu	Trp Phe Glu Glu Trp	Gln Ala Glu Leu Lys	Gly
470		475	480
Lys Arg Gly Ser	Asp Tyr Glu Thr Phe	Lys Asn Ser Phe Val	Glu
485		490	495
Ala Ser Met Ser	Val Val Leu Lys Leu	Phe Pro Gln Leu Glu	Gly
500		505	510
Lys Val Glu Ser	Val Thr Ala Gly Ser	Pro Leu Thr Asn Gln	Phe
515		520	525
Tyr Leu Ala Ala	Pro Arg Gly Ala Cys	Tyr Gly Ala Asp His	Asp
530		535	540
Leu Gly Arg Leu	His Pro Cys Val Met	Ala Ser Leu Arg Ala	Gln
545		550	555
Ser Pro Ile Pro	Asn Leu Tyr Leu Thr	Gly Gln Asp Ile Phe	Thr
560		565	570
Cys Gly Leu Val	Gly Ala Leu Gln Gly	Ala Leu Leu Cys Ser	Ser
575		580	585
Ala Ile Leu Lys	Arg Asn Leu Tyr Ser	Asp Leu Lys Asn Leu	Asp
590		595	600
Ser Arg Ile Arg	Ala Gln Lys Lys Lys	Asn	
605		610	

<210> 114
 <211> 1701
 <212> DNA
 <213> Homo sapiens

<400> 114
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 gatagggctg acgctgctgc tgtgtgcggt gctgctgagc ttggcctcgg 150
 cgtcctcggg tgaagaaggc agccaggatg aatccttaga ttccaagact 200
 actttgacat cagatgagtc agtaaaggac catactactg caggcagagt 250
 agttgctggt caaatatttc ttgattcaga agaattctgaa ttagaatcct 300
 ctattcaaga agaggaagac agcctcaaga gccaagaggg ggaaagtgtc 350
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400
 tgaagagcca aagaaagtac ggaaaccagc tttgaccgcc attgaaggca 450

Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val	35	40	45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe	50	55	60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu	65	70	75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp	80	85	90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu	95	100	105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly	110	115	120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp	125	130	135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg	140	145	150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp	155	160	165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met	170	175	180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn	185	190	195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu	200	205	210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val	215	220	225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln	230	235	240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro	245	250	255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly	260	265	270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly	275	280	285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg	290	295	300

Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 116

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 cttccttctg atggggacct tctgtcagt ttcccagaca gtccctggccc 150
 agctggatgc actgctggtc ttcccaggcc aagtggctca actctcctgc 200
 acgctcagcc cccagcacgt caccatcagg gactacggtg tgtcctggta 250
 ccagcagcgg gcaggcagtg cccctcgata tctcctctac taccgctcgg 300
 aggaggatca ccaccggcct gctgacatcc ccgatcgatt ctcggcagcc 350
 aaggatgagg cccacaatgc ctgtgtcctc accattagtc ccgtgcagcc 400
 tgaagacgac gcggattact actgctctgt tggctacggc tttagtcctt 450
 aggggtgggg tgtgagatgg gtgcctcccc tctgcctccc atttctgccc 500
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 aaaatggggtt aataatattc aacatgtcaa caac 584

<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
 Met Ala Cys Arg Cys Leu Ser Phe Leu Leu Met Gly Thr Phe Leu
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 Ser Val Ser Gln Thr Val Leu Ala Gln Leu Asp Ala Leu Leu Val
 20 25 30
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens

<400> 118

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 ccccgccgcc cgcccgtga gccccccgcc gaggtccgga caggccgaga 150
 tgacgccgag cccctgttg ctgctcctgc tgccgccgct gctgctgggg 200
 gccttcccac cggcgcgcgc cgcccaggc ccccaaaga tggcggacaa 250
 ggtggtccca cggcaggtgg cccggctggg ccgcactgtg cggctgcagt 300
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 cgcaccatcc acagcggtg gagccgttc cgctgctgc cgcaggggct 400
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 ccaccaacgg cttcggcagc ctgagcgtca actacaccct cgctgctgctg 500
 gatgacatta gcccagggaa ggagagcctg gggcccga gctcctctgg 550
 ggggtcaagag gaccccgcca gccagcagtg ggcacgaccg cgcttcacac 600
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 caaggtgat gtgatccagc ggaccggttc caagcccggt ctcacaggca 900
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 ccacccccca cccactgtc gtggtggccc cagatctctg taattttatg 3350
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 aa 3402

<210> 119
 <211> 504
 <212> PRT
 <213> Homo sapiens

<400> 119
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 Met Ala Asp Lys Val Val Pro Arg Gln Val Ala Arg Leu Gly Arg
 35 40 45
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu
 50 55 60
 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser
 65 70 75
 Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu
 80 85 90
 Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe
 95 100 105
 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile
 110 115 120
 Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly
 125 130 135
 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr
 140 145 150
 Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly
 155 160 165
 Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
 170 175 180
 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Glu
 185 190 195
 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
 200 205 210
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn
 215 220 225
 Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln
 230 235 240

Arg	Thr	Arg	Ser	Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn
				245					250					255
Thr	Thr	Val	Asp	Phe	Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val
				260					265					270
Arg	Ser	Asp	Val	Lys	Pro	Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu
				275					280					285
Tyr	Gly	Ala	Glu	Gly	Arg	His	Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly
				290					295					300
Gln	Lys	Phe	Val	Val	Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro
				305					310					315
Asp	Gly	Ser	Tyr	Leu	Asn	Lys	Leu	Leu	Ile	Thr	Arg	Ala	Arg	Gln
				320					325					330
Asp	Asp	Ala	Gly	Met	Tyr	Ile	Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly
				335					340					345
Tyr	Ser	Phe	Arg	Ser	Ala	Phe	Leu	Thr	Val	Leu	Pro	Asp	Pro	Lys
				350					355					360
Pro	Pro	Gly	Pro	Pro	Val	Ala	Ser	Ser	Ser	Ser	Ala	Thr	Ser	Leu
				365					370					375
Pro	Trp	Pro	Val	Val	Ile	Gly	Ile	Pro	Ala	Gly	Ala	Val	Phe	Ile
				380					385					390
Leu	Gly	Thr	Leu	Leu	Leu	Trp	Leu	Cys	Gln	Ala	Gln	Lys	Lys	Pro
				395					400					405
Cys	Thr	Pro	Ala	Pro	Ala	Pro	Pro	Leu	Pro	Gly	His	Arg	Pro	Pro
				410					415					420
Gly	Thr	Ala	Arg	Asp	Arg	Ser	Gly	Asp	Lys	Asp	Leu	Pro	Ser	Leu
				425					430					435
Ala	Ala	Leu	Ser	Ala	Gly	Pro	Gly	Val	Gly	Leu	Cys	Glu	Glu	His
				440					445					450
Gly	Ser	Pro	Ala	Ala	Pro	Gln	His	Leu	Leu	Gly	Pro	Gly	Pro	Val
				455					460					465
Ala	Gly	Pro	Lys	Leu	Tyr	Pro	Lys	Leu	Tyr	Thr	Asp	Ile	His	Thr
				470					475					480
His	Thr	His	Thr	His	Ser	His	Thr	His	Ser	His	Val	Glu	Gly	Lys
				485					490					495
Val	His	Gln	His	Ile	His	Tyr	Gln	Cys						
				500										

<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

cgagatgacg ccgagccccc 20

<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcggcaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

tgctgctcct gctgccgccg ctgctgctgg gggccttccc gccgg 45

<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

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cccaggggac cgcattccag agtcagtgc tctgtgaagc acccacatct 100

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gcctgggtgt tctccttcct ggtcctggaa gtcacatctg tgttggggag 200

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acctgcccac tgggccaggt gaatgctgac tgtgatgcct gcatgtgcca 800

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 catggttttg cccacctctg caatagtgat aatctgatgc tgaagatcaa 4050

Gln Val Asn Ala Asp Cys Asp Ala Cys Met Cys Gln Asp Phe Met	215	220	225
Leu His Gly Ala Val Ser Leu Pro Gly Gly Ala Pro Ala Ser Gly	230	235	240
Ala Ala Ile Tyr Leu Leu Thr Lys Thr Pro Lys Leu Leu Thr Gln	245	250	255
Thr Asp Ser Asp Gly Arg Phe Arg Ile Pro Gly Leu Cys Pro Asp	260	265	270
Gly Lys Ser Ile Leu Lys Ile Thr Lys Val Lys Phe Ala Pro Ile	275	280	285
Val Leu Thr Met Pro Lys Thr Ser Leu Lys Ala Ala Thr Ile Lys	290	295	300
Ala Glu Phe Val Arg Ala Glu Thr Pro Tyr Met Val Met Asn Pro	305	310	315
Glu Thr Lys Ala Arg Arg Ala Gly Gln Ser Val Ser Leu Cys Cys	320	325	330
Lys Ala Thr Gly Lys Pro Arg Pro Asp Lys Tyr Phe Trp Tyr His	335	340	345
Asn Asp Thr Leu Leu Asp Pro Ser Leu Tyr Lys His Glu Ser Lys	350	355	360
Leu Val Leu Arg Lys Leu Gln Gln His Gln Ala Gly Glu Tyr Phe	365	370	375
Cys Lys Ala Gln Ser Asp Ala Gly Ala Val Lys Ser Lys Val Ala	380	385	390
Gln Leu Ile Val Thr Ala Ser Asp Glu Thr Pro Cys Asn Pro Val	395	400	405
Pro Glu Ser Tyr Leu Ile Arg Leu Pro His Asp Cys Phe Gln Asn	410	415	420
Ala Thr Asn Ser Phe Tyr Tyr Asp Val Gly Arg Cys Pro Val Lys	425	430	435
Thr Cys Ala Gly Gln Gln Asp Asn Gly Ile Arg Cys Arg Asp Ala	440	445	450
Val Gln Asn Cys Cys Gly Ile Ser Lys Thr Glu Glu Arg Glu Ile	455	460	465
Gln Cys Ser Gly Tyr Thr Leu Pro Thr Lys Val Ala Lys Glu Cys	470	475	480
Ser Cys Gln Arg Cys Thr Glu Thr Arg Ser Ile Val Arg Gly Arg	485	490	495
Val Ser Ala Ala Asp Asn Gly Glu Pro Met Arg Phe Gly His Val	500	505	510
Tyr Met Gly Asn Ser Arg Val Ser Met Thr Gly Tyr Lys Gly Thr	515	520	525

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
1175 1180

<210> 125
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 125
ctggtgcctc aacagggagc ag 22

<210> 126
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 126
ccattgtgca ggtcaggtca cag 23

<210> 127
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 127
ctggagcaag tgctcagctg cctgtggtca gactgggggc 40

<210> 128
<211> 2819
<212> DNA
<213> Homo sapiens

<400> 128
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ttgggatctg ctttgaggtc ccatcttcat ttaaaaaaaaa atacagagac 150
ctacctaccc gtacgcatac atacatatgt gtatatatat gtaaactaga 200
caaagatcgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250
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agtgaaactc gatcctccgg atattacctg tggagaccct cctgagacgt 500
 tctgtgcaat gggcaatccc tacatgtgca ataatgagtg tgatgagagt 550
 acccctgagc tggcacaccc ccctgagctg atgtttgatt ttgaaggaag 600
 acatccctcc acattttggc agtctgccac ttggaaggag tatcccaagc 650
 ctctccaggt taacatcact ctgtcttggg gcaaaaccat tgagctaaca 700
 gacaacatag ttattacctt tgaatctggg cgtccagacc aaatgatcct 750
 ggagaagtct ctcgattatg gacgaacatg gcagccctat cagtattatg 800
 ccacagactg cttagatgct tttcacatgg atcctaaatc cgtgaaggat 850
 ttatcacagc atacggtctt agaaatcatt tgcacagaag agtactcaac 900
 agggatataca acaaataagca aaataatcca ctttgaaatc aaagacaggt 950
 tcgcgctttt tgctggacct cgcctacgca atatggcttc cctctacgga 1000
 cagctggata caaccaagaa actcagagat ttctttacag tcacagacct 1050
 gaggataagg ctgttaagac cagccgttgg ggaaatattt gtagatgagc 1100
 tacacttggc acgctacttt tacgcgatct cagacataaa ggtgagagga 1150
 aggtgcaagt gtaatctcca tgccactgta tgtgtgtatg acaacagcaa 1200
 attgacatgc gaatgtgagc acaacactac aggtccagac tgtgggaaat 1250
 gcaagaagaa ttatcagggc cgaccttggg gtccaggctc ctatctcccc 1300
 atcccccagg gcaactgcaa tacctgtatc ccagtatatt ccagtattgg 1350
 tacgaatgtc tgcgacaacg agctcctgca ctgccagaac ggagggagct 1400
 gccacaacaa cgtgcgctgc ctgtgcccgg ccgcatacac gggcatcctc 1450
 tgcgagaagc tgcggtgcga ggaggtctgg agctgcggct ccgactctgg 1500
 ccagggcgcg ccccgccagc gcacccagc gctgctgctg ctgaccacgc 1550
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 ccggacgggc ctgtgccgtg gggaagcaga cacaacccaa acatttgcta 1650
 ctaacatagg aaacacacac atacagacac cccactcag acagtgtaca 1700
 aactaagaag gcctaactga actaagccat atttatcacc cgtggacagc 1750
 acatccgagt caagactggt aatttctgac tccagaggag ttggcagctg 1800
 ttgatattat cactgcaaat cacattgcca gctgcagagc atattgtgga 1850
 ttggaaggc tgcgacagcc ccccaaacag gaaagacaaa aaacaaacaa 1900
 atcaaccgac ctaaaaacat tggctactct agcgtggtgc gccctagtag 1950
 gactccgccc agtgtgtgga ccaaccaa atgcattcttt gctgtcaggt 2000
 gcattgtggg cataaggaaa tctgttacaa gctgccatat tggcctgctt 2050

ccgtccctga atcccttcca acctgtgctt tagtgaacgt tgctctgtaa 2100
ccotcgttgg ttgaaagatt tctttgtctg atgttagtga tgcacatgtg 2150
taacagcccc ctctaaaagc gcaagccagt catacccctg tatatcttag 2200
cagcactgag tccagtgcga gcacacaccc actatacaag agtggctata 2250
ggaaaaaaga aagtgtatct atccttttgt attcaaataga agttattttt 2300
cttgaactac tgtaatatgt agattttttg tattattgcc aatttgtgtt 2350
accagacaat ctgttaatat atctaattcg aatcagcaaa gactgacatt 2400
ttattttgtc ctctttcgtt ctgttttgtt tcaactgtgca gagatttctc 2450
tgtaaggggca acgaacgtgc tggcatcaaa gaatatcagt ttacatatat 2500
aacaagtgtg ataagattcc accaaaggac attctaaatg ttttcttgtt 2550
gctttaaacac tggaagattt aaagaataaa aactcctgca taaacgattt 2600
caggaatttg tattgcaatt tcttaagatg aaaggaacag ccaccaagca 2650
gtttcacact cactttactg atttctgtgt ggactgagta cattcagctg 2700
acgaatttag ttcccaggaa gatggattga tgttcactag cttggacaac 2750
ttctgcaaaa tatgagacta tttccacttg ggaaaaatta caacagcaaa 2800
aaaaaaaaa aaaaaaaaaa 2819

<210> 129
<211> 438
<212> PRT
<213> Homo sapiens

<400> 129
Met Tyr Leu Ser Arg Ser Leu Ser Ile His Ala Leu Trp Val Thr
1 5 10 15
Val Ser Ser Val Met Gln Pro Tyr Pro Leu Val Trp Gly His Tyr
20 25 30
Asp Leu Cys Lys Thr Gln Ile Tyr Thr Glu Glu Gly Lys Val Trp
35 40 45
Asp Tyr Met Ala Cys Gln Pro Glu Ser Thr Asp Met Thr Lys Tyr
50 55 60
Leu Lys Val Lys Leu Asp Pro Pro Asp Ile Thr Cys Gly Asp Pro
65 70 75
Pro Glu Thr Phe Cys Ala Met Gly Asn Pro Tyr Met Cys Asn Asn
80 85 90
Glu Cys Asp Ala Ser Thr Pro Glu Leu Ala His Pro Pro Glu Leu
95 100 105
Met Phe Asp Phe Glu Gly Arg His Pro Ser Thr Phe Trp Gln Ser
110 115 120
Ala Thr Trp Lys Glu Tyr Pro Lys Pro Leu Gln Val Asn Ile Thr

	125		130		135
Leu Ser Trp Ser	Lys Thr Ile Glu Leu	Thr Asp Asn Ile Val	Ile		
	140		145		150
Thr Phe Glu Ser	Gly Arg Pro Asp Gln	Met Ile Leu Glu Lys	Ser		
	155		160		165
Leu Asp Tyr Gly	Arg Thr Trp Gln Pro	Tyr Gln Tyr Tyr Ala	Thr		
	170		175		180
Asp Cys Leu Asp	Ala Phe His Met Asp	Pro Lys Ser Val Lys	Asp		
	185		190		195
Leu Ser Gln His	Thr Val Leu Glu Ile	Ile Cys Thr Glu Glu	Tyr		
	200		205		210
Ser Thr Gly Tyr	Thr Thr Asn Ser Lys	Ile Ile His Phe Glu	Ile		
	215		220		225
Lys Asp Arg Phe	Ala Leu Phe Ala Gly	Pro Arg Leu Arg Asn	Met		
	230		235		240
Ala Ser Leu Tyr	Gly Gln Leu Asp Thr	Thr Lys Lys Leu Arg	Asp		
	245		250		255
Phe Phe Thr Val	Thr Asp Leu Arg Ile	Arg Leu Leu Arg Pro	Ala		
	260		265		270
Val Gly Glu Ile	Phe Val Asp Glu Leu	His Leu Ala Arg Tyr	Phe		
	275		280		285
Tyr Ala Ile Ser	Asp Ile Lys Val Arg	Gly Arg Cys Lys Cys	Asn		
	290		295		300
Leu His Ala Thr	Val Cys Val Tyr Asp	Asn Ser Lys Leu Thr	Cys		
	305		310		315
Glu Cys Glu His	Asn Thr Thr Gly Pro	Asp Cys Gly Lys Cys	Lys		
	320		325		330
Lys Asn Tyr Gln	Gly Arg Pro Trp Ser	Pro Gly Ser Tyr Leu	Pro		
	335		340		345
Ile Pro Lys Gly	Thr Ala Asn Thr Cys	Ile Pro Ser Ile Ser	Ser		
	350		355		360
Ile Gly Thr Asn	Val Cys Asp Asn Glu	Leu Leu His Cys Gln	Asn		
	365		370		375
Gly Gly Thr Cys	His Asn Asn Val Arg	Cys Leu Cys Pro Ala	Ala		
	380		385		390
Tyr Thr Gly Ile	Leu Cys Glu Lys Leu	Arg Cys Glu Glu Ala	Gly		
	395		400		405
Ser Cys Gly Ser	Asp Ser Gly Gln Gly	Ala Pro Pro His Gly	Thr		
	410		415		420
Pro Ala Leu Leu	Leu Leu Thr Thr Leu	Leu Gly Thr Ala Ser	Pro		
	425		430		435
Leu Val Phe					

<210> 130
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 130
 tcgattatgg acgaacatgg cagc 24

<210> 131
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 131
 ttctgagatc cctcatcctc 20

<210> 132
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 132
 aggttcaggg acagcaagtt tggg 24

<210> 133
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 133
 ttgtctggac ctcggtacg gaattggctt ccctctacgg acagctggat 50

<210> 134
 <211> 1493
 <212> DNA
 <213> Homo sapiens

<400> 134
 cccacgcgtc cgggtgacct gggccgagcc ctcccggtcg gctaagattg 50
 ctgaggaggc ggcgggtagc tggcaggcgc cgacttccga aggccgccgt 100
 cggggcgagg tgtcctcatg acttctcttg tggaccatgt ccgtgatctt 150
 ttttgccctgc gtggtacggg taagggatgg actgcccctc tcagcctcta 200
 ctgattttta ccacacccaa gatttttttg aatggaggag acggctcaag 250
 agtttagcct tgcgactggc ccagtatcca ggtcgagggt ctgcagaagg 300

ttgtgacttt agtatacatt ttctctcttt cggggacgtg gcctgcatgg 350
ctatctgctc ctgccagtgt ccagcagcca tggccttctg cttcctggag 400
accctgtggt gggaattcac agcttctat gacactacct gcattggcct 450
agcctccagg ccatacgctt ttcttgagtt tgacagcatc attcagaaaag 500
tgaagtggca ttttaactat gtaagttcct ctcagatgga gtgcagcttg 550
gaaaaaattc aggaggagct caagttgcag cctccagcgg ttctcactct 600
ggaggacaca gatgtggcaa atggggtgat gaatgggtcac acaccgatgc 650
acttgagacc tgctcctaatt ttccgaatgg aaccagtgc agccctgggt 700
atcctctccc tcattctcaa catcatgtgt gctgccctga atctcattcg 750
aggagttcac cttgcagaac attctttaca ggatccaagg agctggttct 800
gctggttgga ccaaacctcg tgagccagcc acccctgacc caaatgagga 850
gagctctgat tctcccatcc gggagcagtg atgtcaaact tctgctgctg 900
gggaaatctc atcagcaggg agcctgtgga aaagggcatg tcagtgaat 950
ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000
gctgttgccc acaagcgctt tttatttagg gtaaaattaa caaatccatt 1050
ctattcctct gacctatgct tagtacatat gacctttaac ccttacattt 1100
atatgattct ggggttgctt cagaagtgtt atttcatgaa tcattcatat 1150
gatttgatcc ccaggattc tattttgttt aatgggcttt tctactaaaa 1200
gcataaaata ctgaggctga tttagtcagg gcaaaaccat ttactttaca 1250
tattcgtttt caatacttgc tgttcatgtt acacaagctt cttacggttt 1300
tcttgtaaca ataaatattt tgagtaaata atgggtacat tttacaaaac 1350
tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400
tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450
aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135
<211> 228
<212> PRT
<213> Homo sapiens

<400> 135
Met Ser Val Ile Phe Phe Ala Cys Val Val Arg Val Arg Asp Gly
1 5 10 15
Leu Pro Leu Ser Ala Ser Thr Asp Phe Tyr His Thr Gln Asp Phe
20 25 30
Leu Glu Trp Arg Arg Arg Leu Lys Ser Leu Ala Leu Arg Leu Ala
35 40 45

Gln	Tyr	Pro	Gly	Arg	Gly	Ser	Ala	Glu	Gly	Cys	Asp	Phe	Ser	Ile	
				50					55					60	
His	Phe	Ser	Ser	Phe	Gly	Asp	Val	Ala	Cys	Met	Ala	Ile	Cys	Ser	
				65					70					75	
Cys	Gln	Cys	Pro	Ala	Ala	Met	Ala	Phe	Cys	Phe	Leu	Glu	Thr	Leu	
				80					85					90	
Trp	Trp	Glu	Phe	Thr	Ala	Ser	Tyr	Asp	Thr	Thr	Cys	Ile	Gly	Leu	
				95					100					105	
Ala	Ser	Arg	Pro	Tyr	Ala	Phe	Leu	Glu	Phe	Asp	Ser	Ile	Ile	Gln	
				110					115					120	
Lys	Val	Lys	Trp	His	Phe	Asn	Tyr	Val	Ser	Ser	Ser	Gln	Met	Glu	
				125					130					135	
Cys	Ser	Leu	Glu	Lys	Ile	Gln	Glu	Glu	Leu	Lys	Leu	Gln	Pro	Pro	
				140					145					150	
Ala	Val	Leu	Thr	Leu	Glu	Asp	Thr	Asp	Val	Ala	Asn	Gly	Val	Met	
				155					160					165	
Asn	Gly	His	Thr	Pro	Met	His	Leu	Glu	Pro	Ala	Pro	Asn	Phe	Arg	
				170					175					180	
Met	Glu	Pro	Val	Thr	Ala	Leu	Gly	Ile	Leu	Ser	Leu	Ile	Leu	Asn	
				185					190					195	
Ile	Met	Cys	Ala	Ala	Leu	Asn	Leu	Ile	Arg	Gly	Val	His	Leu	Ala	
				200					205					210	
Glu	His	Ser	Leu	Gln	Asp	Pro	Arg	Ser	Trp	Phe	Cys	Trp	Leu	Asp	
				215					220					225	
Gln	Thr	Ser													

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
 tgcttcctgg agaccctgtg gtgggaattc acagcttctt atgacactac 50
 ctgcattggc ntagcctcca ggccatacgc ttttcttgag tttgacagca 100
 tcattcagaa agtgaagtgg cattttaact atgtaagttc ctntcagatg 150
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200
 ggtttctcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137
 <211> 2300
 <212> DNA

<213> Homo sapiens

<400> 137

ctcagcggcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50
acgtgagcgc gacccgacct taaagagtgg ggagcaaagg gaggacagag 100
ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgtcc 150
ggacgactgt atctgagccc cagactgccc cgagtttctg tcgcaggctg 200
cgaggaaagg cccctaggct gggctctgggt gcttggcggc ggcggcttcc 250
tccccgctcg tcttccccgg gccagagge acctcggett cagtcatgct 300
gagcagagta tggaagcacc tgactacgaa gtgctatccg tgcgagaaca 350
gctattccac gagaggatcc gcgagtgtat tatatcaaca cttctgtttg 400
caacactgta catcctctgc cacatcttcc tgaccgctt caagaagcct 450
gctgagttca ccacagtgga tgatgaagat gccaccgtca acaagattgc 500
gctcgagctg tgacacctta ccctggcaat tgccctgggt gctgtcctgc 550
tcttgccctt ctccatcatc agcaatgagg tgctgctctc cctgcctcgg 600
aactactaca tccagtggct caacggctcc ctcatccatg gcctctggaa 650
ccttggtttt ctcttcccca acctgtccct catcttctc atgccctttg 700
catatttctt cactgagtct gagggctttg ctggctccag aaaggggtgc 750
ctgggcccgg tctatgagac agtggtgatg ttgatgctcc tctactctgt 800
ggtgctaggt atggtgtggg tggcatcagc cattgtggac aagaacaagg 850
ccaacagaga gtcactctat gacttttggg agtactatct cccctacctc 900
tactcatgca tctccttctt tggggttctg ctgctcctgg tgtgtactcc 950
actgggtctc gcccgcatgt tctccgtcac tgggaagctg ctagtcaagc 1000
cccggctgct ggaagacctg gaggagcagc tgtactgctc agcctttgag 1050
gaggcagccc tgaccgcgag gatctgtaat cctacttctt gctggctgcc 1100
tttagacatg gagctgctac acagacaggt cctggctctg cagacacaga 1150
gggtcctgct ggagaagagg cggaaggctt cagcctggca acggaacctg 1200
ggctaccccc tggctatgct gtgcttgctg gtgctgacgg gcctgtctgt 1250
gctcattgtg gccatccaca tcttgagct gctcatcgat gaggctgcca 1300
tgccccgagg catgcagggt acctccttag gccaggctct cttctccaag 1350
ctgggctcct ttggtgccgt cattcagggt gtactcatct ttacctaata 1400
ggtgtcctca gttgtgggct tctatagctc tccactcttc cggagcctgc 1450
ggcccagatg gcacgacact gccatgacgc agataattgg gaactgtgtc 1500

tgtctcctgg tcctaagctc agcaacttct gtcttctctc gaaccctggg 1550
gctcactcgc tttgacctgc tgggtgactt tggacgcttc aactggctgg 1600
gcaatttcta cattgtgttc ctctacaacg cagcctttgc aggcctcacc 1650
acactctgtc tggatgaagac cttcactgca gctgtgcggg cagagctgat 1700
ccgggccttt gggctggaca gactgccgct gcccgctctcc gggttcccc 1750
aggcatctag gaagacccag caccagtgc ctccagctgg ggggtgggaag 1800
gaaaaaactg gacactgcca tctgctgcct aggcctggag ggaagcccaa 1850
ggctacttgg acctcaggac ctggaatctg agaggggtgg tggcagaggg 1900
gagcagagcc atctgcacta ttgcataatc tgagccagag tttgggacca 1950
ggacctcctg cttttccata cttactgtg gcctcagcat ggggtagggc 2000
tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050
gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100
tgtgcaatag ggtggggtag gggcagggaa aggactgggc cagggcaggg 2150
tcgggagata gattgtctcc cttgcctctg gccagcaga gcctaagcac 2200
tgtgctatcc tggaggggct ttggaccacc tgaaagacca aggggatagg 2250
gaggaggagg cttcagccat cagcaataaa gttgatcca gggaaaaaaa 2300

<210> 138
<211> 489
<212> PRT
<213> Homo sapiens

<400> 138
Met Glu Ala Pro Asp Tyr Glu Val Leu Ser Val Arg Glu Gln Leu
1 5 10 15
Phe His Glu Arg Ile Arg Glu Cys Ile Ile Ser Thr Leu Leu Phe
20 25 30
Ala Thr Leu Tyr Ile Leu Cys His Ile Phe Leu Thr Arg Phe Lys
35 40 45
Lys Pro Ala Glu Phe Thr Thr Val Asp Asp Glu Asp Ala Thr Val
50 55 60
Asn Lys Ile Ala Leu Glu Leu Cys Thr Phe Thr Leu Ala Ile Ala
65 70 75
Leu Gly Ala Val Leu Leu Leu Pro Phe Ser Ile Ile Ser Asn Glu
80 85 90
Val Leu Leu Ser Leu Pro Arg Asn Tyr Tyr Ile Gln Trp Leu Asn
95 100 105
Gly Ser Leu Ile His Gly Leu Trp Asn Leu Val Phe Leu Phe Pro
110 115 120
Asn Leu Ser Leu Ile Phe Leu Met Pro Phe Ala Tyr Phe Phe Thr

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg		
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro		
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139
 <211> 294
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 53, 57
 <223> unknown base

<400> 139
 ggctgccgag ggaaggcccc ttgggttggt cttgggttgct tggcggcggc 50
 ggnttcntcc ccgctcgtcc tccccgggcc cagaggcacc tcggcttcag 100
 tcatgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150
 gagaacagct attccacgag aggatccgcg agtgtattat atcaaacactt 200
 ctgtttgcaa cactgtacat cctctgccac atcttctga cccgcttcaa 250
 gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140
 <211> 526
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 197, 349
 <223> unknown base

<400> 140
 gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50
 aggcggtggt gcctgccctt taagggcggg gcgtccggac gactgtatct 100
 gagccccaga ctgccccgag tttctgtcgc aggctgcgag gaaaggcccc 150
 taggctgggt ctgggtgctt gcggcggcgg cttcctcccc gttgtcntcc 200
 ccgggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250
 cacctgacta cgaagtgcta tccgtgcgag aacagctatt ccacgagagg 300
 atccgcgagt gtattatatc aacacttctg tttgcaacac tgtacatcnt 350
 ctgccacatc ttcctgacct gcttcaagaa gcctgctgag ttcaccacag 400
 tggatgatga agatgccacc gtcaacaaga ttgcgctoga gctgtgcacc 450

tttaccctgg caattgccct ggggtgctgtc ctgctcctgc ccttctccat 500
 catcagcaat gaggtgctgc actccc 526
 <210> 141
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 141
 gactgtatct gagccccaga ctgc 24
 <210> 142
 <211> 20
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 142
 tcagcaatga ggtgctgctc 20
 <210> 143
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 143
 tgaggaagat gagggacagg ttgg 24
 <210> 144
 <211> 50
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 144
 tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50
 <210> 145
 <211> 685
 <212> DNA
 <213> Homo sapiens
 <400> 145
 gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50
 caaacctgtt ttggaattga ggaaacttct cttttgatct cagcccttgg 100
 tgggtccaggt cttcatgctg ctgtgggtga tattactggc cctggctcct 150
 gtcagtggac agtttgcaag gacacccagg ccattatatt tccctccagcc 200
 tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaacaa aatggtacca tcggtacctt 300
 gggaaagaaa tactaagaga aaccccagac aatataccttg aggttcagga 350
 atctggagag tacagatgcc agggccaggg ctcccctctc agtagccctg 400
 tgcacttgga tttttcttca gagatgggat ttctcatgc tgcccaggct 450
 aatgttgaac tcttgggctc aagtgatctg ctcacctagg cctctcaaag 500
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtggttctg aggtgccggg caaaggcgga agtaacactg 600
 aataatacta tttaacaaga tgataatgtc ctggcattcc ttaataaaaag 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly
 1 5 10 15
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120
 Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
 cagaagaggg ggctagctag ctgtctctgc ggaccaggga gacccccgcg 50
 ccccccggt gtgaggcggc ctcacagggc cggtgggct ggcgagccga 100
 cgcggcggcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr	1	5	10	15
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu	20	25	30	
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr	35	40	45	
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp	50	55	60	
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu	65	70	75	
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly	80	85	90	
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile	95	100	105	
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr	110	115	120	
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile	125	130	135	
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe	140	145	150	
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly	155	160	165	
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu	170	175	180	
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu	185	190	195	
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val	200	205	210	
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile	215	220	225	
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg	230	235	240	
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly	245	250	255	
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu	260	265	270	
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val	275	280	285	
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp	290	295	300	

Lys	Lys	Gly	Glu	Gly	Leu	Pro	Asn	Phe	Asp	Asn	Asn	Asn	Ile	Lys
				305					310					315
Gly	Ser	Leu	Ile	Ile	Thr	Phe	Asp	Val	Asp	Phe	Pro	Lys	Glu	Gln
				320					325					330
Leu	Thr	Glu	Glu	Ala	Arg	Glu	Gly	Ile	Lys	Gln	Leu	Leu	Lys	Gln
				335					340					345
Gly	Ser	Val	Gln	Lys	Val	Tyr	Asn	Gly	Leu	Gln	Gly	Tyr		
				350					355					

<210> 149
 <211> 509
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> unsure
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445, 482
 <223> unknown base

<400> 149
 tgggaccagg gaaccccgagg ccccccggtg gagngcctaa caggccggtg 50
 gntgcgaccg aagcggcggg cggaggaggt tttgaggatt tttggaacag 100
 gacccggaca gaggaaccat gggtccgcag aacntgagca cnttttgcct 150
 gttgntgnta tacttcatcg gggcggtgat tgccggacga gatttntata 200
 agattttggg gtgcctngaa gtgccttnta taaaggatat taaaaaggcc 250
 tataggaaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300
 acaagcccag gagaaattcc aggatttggg tgctgcttat gaggttntgt 350
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400
 aaagatggtn atcagagctc ccattggagac attttttcac acttntttgg 450
 ggattttggt ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500
 ttccaagag 509

<210> 150
 <211> 1532
 <212> DNA
 <213> Homo sapiens

<400> 150
 ggcacgaggc ggcggggcag tcgcgggatg cgcgggggag ccacagcctg 50
 aggccctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100
 ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150
 gaccgggact gagtcaggag ccctctggaa gcatggagac tgtggtgatt 200
 gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250
 ggtgctggtt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgattc taagcccatt gtggacctca ttggtgccat ggagacccag 350
tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccc 400
cattgaggcc attctggaga atgaagactg gatcgaagat gcctcgggtc 450
tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500
aagcttggtg ccatgacaat gggctctggg gccaaagatga agacttcagc 550
cagtgtcagc gacatcattg tgggtggccaa gcggatcagc cccagggtgg 600
atgatgttgt gaagtcgatg taccctccgt tggaccccaa actcctggac 650
gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgctggtgac 700
aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750
tgtcggctgc tgaggagcat ttggaagtcc ttcgagaagc agccctagct 800
tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850
gtctgcaatt tagtgccctac aggccagcag ctagccatga aggccctgc 900
cgccatccct ggatggctca gcttagcctt ctactttttc ctatagagtt 950
agttgttctc cacggctgga gagttcagct gtgtgtgcat agtaaagcag 1000
gagatccccg tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050
gagtggcagt ctaatactac agtttagggga gatgccattc actctctgca 1100
agaggagtat tgaaaactgg tggactgtca gctttattta gctcacctag 1150
tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200
taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250
ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300
tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350
tgtattatct gcctgggtccc tgaggcgtct gggctctctcc tctcccttgc 1400
aggtttggtt ttgaagctga ggaactacaa agttgatgat ttctttttta 1450
tctttatgcc tgcaatttta cctagctacc actaggtgga tagtaaattt 1500
atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151
<211> 226
<212> PRT
<213> Homo sapiens

<400> 151
Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile
1 5 10 15
Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg
20 25 30
Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro

	35	40	45
Ile Val Asp Leu Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser	50	55	60
Glu Leu Glu Leu Asp Asp Val Val Ile Thr Asn Pro His Ile Glu	65	70	75
Ala Ile Leu Glu Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu	80	85	90
Met Ser His Cys Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr	95	100	105
Glu Lys Leu Val Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys	110	115	120
Thr Ser Ala Ser Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile	125	130	135
Ser Pro Arg Val Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu	140	145	150
Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser	155	160	165
Val Ser His Leu Val Leu Val Thr Arg Asn Ala Cys His Leu Thr	170	175	180
Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu	185	190	195
His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp	200	205	210
Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala	215	220	225
Ile			

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
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 tcgccgctgt cccaccact gcagccatga tctccttaac ggacacgcag 100
 aaaattggaa tgggattaac aggatttgga gtgtttttcc tgttctttgg 150
 aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200
 ttgtagccgg ctgggctttt gtaattgggt tagaaagaac attcagattc 250
 ttcttccaaa aacataaaat gaaagctaca gggttttttc tgggtggtgt 300

attttagtagtc cttattgggtt ggcctttgat aggcattgatc ttcgaaattt 350
atggatttttt tctcttggttc aggggcttct ttcctgtcgt tgttggtttt 400
attagaagag tgccagtcct tggatccctc ctaaattttac ctggaattag 450
atcatttgta gataaagttg gagaaagcaa caatatggta taacaacaag 500
tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550
agaatattca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600
tacaggagtt taaaacgtat agcctacaaa gtaccagcag caaattagca 650
aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700
caagcaaact gagagagggtg aaatccatgt taatgatgct taagaaactc 750
ttgaaggcta tttgtgttgt ttttccacaa tgtgcgaaac tcagccatcc 800
ttagagaact gtggtgcctg tttcttttct ttttattttg aaggctcagg 850
agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900
tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgattgga 950
ttgtgtcatt ttaaagtatt aaaaccaagg aaaccccaat tttgatgtat 1000
ggattacttt tttttgngcn cagggcc 1027

<210> 153
<211> 138
<212> PRT
<213> Homo sapiens

<220>
<221> N-myristoylation Sites
<222> 11-16, 51-56 and 116-121
<223> N-myristoylation Sites.

<220>
<221> Transmembrane domains
<222> 12-30, 33-52, 69-89 and 93-109
<223> Transmembrane domains

<220>
<221> Aminoacyl-transfer RNA Synthetases.
<222> 49-59
<223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153
Met Ile Ser Leu Thr Asp Thr Gln Lys Ile Gly Met Gly Leu Thr
1 5 10 15
Gly Phe Gly Val Phe Phe Leu Phe Phe Gly Met Ile Leu Phe Phe
20 25 30
Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly
35 40 45
Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe
50 55 60

Gln	Lys	His	Lys	Met	Lys	Ala	Thr	Gly	Phe	Phe	Leu	Gly	Gly	Val
				65					70					75
Phe	Val	Val	Leu	Ile	Gly	Trp	Pro	Leu	Ile	Gly	Met	Ile	Phe	Glu
				80					85					90
Ile	Tyr	Gly	Phe	Phe	Leu	Leu	Phe	Arg	Gly	Phe	Phe	Pro	Val	Val
				95					100					105
Val	Gly	Phe	Ile	Arg	Arg	Val	Pro	Val	Leu	Gly	Ser	Leu	Leu	Asn
				110					115					120
Leu	Pro	Gly	Ile	Arg	Ser	Phe	Val	Asp	Lys	Val	Gly	Glu	Ser	Asn
				125					130					135

Asn Met Val

<210> 154
 <211> 405
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 66
 <223> unknown base

<400> 154
 gaagacgtgg cggtctctgc ctgggctgtt tcccggttc atttctcccg 50
 actcagcttc ccacntggg ctttccgagg tgctttcgcc gctgtcccca 100
 ccactgcagc catgatctcc ttaacggaca cgcagaaaat tggaatggga 150
 ttaaccggat ttggagtgtt tttcctgttc tttggaatga ttctcttttt 200
 tgacaaagca ctactggcta ttggaaatgt tttatttgta gccggcttgg 250
 cttttgtaat tggtttagaa agaacattca gattcttctt ccaaaaacat 300
 aaaatgaaag ctacaggttt ttttctgggt ggtgtatttg tagtccttat 350
 tggttggcct ttgataggca tgatcttcga aatttatgga ttttttctct 400
 tgttc 405

<210> 155
 <211> 1781
 <212> DNA
 <213> Homo sapiens

<400> 155
 ggcacgaggc tgaaccagc cggtccatc tcagcttctg gtttctaagt 50
 ccatgtgcca aaggctgcca ggaaggagac gccttcctga gtcttgatc 100
 tttcttctt ctggaaatct ttgactgtgg gtagttattt atttctgaat 150
 aagagcgtcc acgcatcatg gacctgcgg gactgctgaa gtctcagttc 200
 ctgtgccacc tggcttctg ctacgtctt attgcctcag ggctaatacat 250

[illegible]Met Asp Leu Ala Gly Leu Leu Lys Ser Gln Phe Leu Cys His Leu
1 5 10 15

Ile Gln Leu Phe Thr Leu Leu Leu Trp Pro Ile Asn Lys Gln Leu
35 40 45

Leu Val Met Leu Leu Glu Trp Trp Ser Gly Thr Glu Cys Thr Ile
65 70 75

Ile Val Val Leu Asn His Lys Phe Glu Ile Asp Phe Leu Cys Gly
95 100 105

Leu Ala Lys Lys Glu Leu Ala Tyr Val Pro Ile Ile Gly Trp Met
125 130 135

Asp Arg Lys Thr Val Ala Thr Ser Leu Gln His Leu Arg Asp Tyr
155 160 165

Thr Glu Lys Lys His Glu Ile Ser Met Gln Val Ala Arg Ala Lys
185 190 195

Phe Ala Ile Thr Val Arg Ser Leu Arg Asn Val Val Ser Ala Val
215 220 225

Leu Gly Val Leu Asn Gly Lys Lys Tyr His Ala Asp Leu Tyr Val
245 250 255

Ser Ala Trp Leu His Lys Leu Tyr Gln Glu Lys Asp Ala Phe Gln
275 280 285

135

	290		295		300									
Pro	Pro	Arg	Arg	Pro	Trp	Thr	Leu	Val	Asn	Trp	Leu	Phe	Trp	Ala
				305					310					315
Ser	Leu	Val	Leu	Tyr	Pro	Phe	Phe	Gln	Phe	Leu	Val	Ser	Met	Ile
				320					325					330
Arg	Ser	Gly	Ser	Ser	Leu	Thr	Leu	Ala	Ser	Phe	Ile	Leu	Val	Phe
				335					340					345
Phe	Val	Ala	Ser	Val	Gly	Val	Arg	Trp	Met	Ile	Gly	Val	Thr	Glu
				350					355					360
Ile	Asp	Lys	Gly	Ser	Ala	Tyr	Gly	Asn	Ser	Asp	Ser	Lys	Gln	Lys
				365					370					375

Leu Asn Asp

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
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 gctttgtgct cggcgcactc gctttccagc acctcaacac ggactcggac 100
 acggaaggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150
 tactgattcc caaatggatg atgttgaagt tgtttataca attgacattc 200
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250
 gaagtaaatg agcaagcact gaagaaaata ttatcaaata tcaaaaagaa 300
 tgtggttagt tggtacaaat tccgtcgtca ttcagatcag atcatgacgt 350
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccac 400
 gaccttggtt ttctgctatt aacaccaagt ataataacag aaagctgctc 450
 tactcatcga ctggaacatt ccttatataa acctcaaaaa ggactttttc 500
 acaggttacc tttagtggtt gccaatctgg gcatgtctga acaactgggt 550
 tataaaactg tatcaggttc ctgtatgtcc actggtttta gccgagcagt 600
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650
 tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700
 atatgcaaaa aagtggaaga cagtgaacaa gcagtagata aactagtaaa 750
 ggatgtaaac agattaaaac gagaaattga gaaaaggaga ggagcacaga 800
 ttcaggcagc aagagagaag aacatccaaa aagaccctca ggagaacatt 850
 tttctttgtc aggcattacg gacctttttt ccaaattctg aattttcttca 900
 ttcatgtgtt atgtctttta aaaatagaca tgttttctaaa agtagctgta 950

actacaacca ccattctgat gtagtagaca atctgacctt aatggtagaa 1000
cacactgaca ttctgaagc tagtccagct agtacaccac aaatcattaa 1050
gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcggg 1100
tgtagatac acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150
caagataaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200
aaagatgaag ggttttggtg aatattcacg gtctcttaca ttttgatcct 1250
ttaaccta caaggagatt tttttatttg gctgatgggt aaagccaaac 1300
atttctattg tttttactat gttgagctac ttgcagtaag ttcatttggt 1350
tttactatgt tcacctgttt gcagtaatac acagataact cttagtgcac 1400
ttacttcaca aagtactttt tcaaacatca gatgctttta tttccaaacc 1450
tttttttcac ctttactaa gttgttgagg ggaaggotta cacagacaca 1500
ttcttttagaa ttggaaaagt gagaccaggc acagtggctc acacctgtaa 1550
tcccagcact tagggaagac aagtcaggag gattgattga agctaggagt 1600
tagagaccag cctgggcaac gtattgagac catgtctatt aaaaaataaa 1650
atggaaaagc aagaatagcc ttattttcaa aatatggaaa gaaatttata 1700
tgaaaattta tctgagtcac taaaattctc cttaagtgat acttttttag 1750
aagtacatta tggctagagt tgccagataa aatgctggat atcatgcaat 1800
aaatttgcaa aacatcatct aaaattttaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158
<211> 409
<212> PRT
<213> Homo sapiens

<400> 158
Met Glu Gly Glu Ser Thr Ser Ala Val Leu Ser Gly Phe Val Leu
1 5 10 15
Gly Ala Leu Ala Phe Gln His Leu Asn Thr Asp Ser Asp Thr Glu
20 25 30
Gly Phe Leu Leu Gly Glu Val Lys Gly Glu Ala Lys Asn Ser Ile
35 40 45
Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp
50 55 60
Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn
65 70 75
Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser
80 85 90
Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His
95 100 105

Ser	Asp	Gln	Ile	Met	Thr	Phe	Arg	Glu	Arg	Leu	Leu	His	Lys	Asn	
				110					115					120	
Leu	Gln	Glu	His	Phe	Ser	Asn	Gln	Asp	Leu	Val	Phe	Leu	Leu	Leu	
				125					130					135	
Thr	Pro	Ser	Ile	Ile	Thr	Glu	Ser	Cys	Ser	Thr	His	Arg	Leu	Glu	
				140					145					150	
His	Ser	Leu	Tyr	Lys	Pro	Gln	Lys	Gly	Leu	Phe	His	Arg	Val	Pro	
				155					160					165	
Leu	Val	Val	Ala	Asn	Leu	Gly	Met	Ser	Glu	Gln	Leu	Gly	Tyr	Lys	
				170					175					180	
Thr	Val	Ser	Gly	Ser	Cys	Met	Ser	Thr	Gly	Phe	Ser	Arg	Ala	Val	
				185					190					195	
Gln	Thr	His	Ser	Ser	Lys	Phe	Phe	Glu	Glu	Asp	Gly	Ser	Leu	Lys	
				200					205					210	
Glu	Val	His	Lys	Ile	Asn	Glu	Met	Tyr	Ala	Ser	Leu	Gln	Glu	Glu	
				215					220					225	
Leu	Lys	Ser	Ile	Cys	Lys	Lys	Val	Glu	Asp	Ser	Glu	Gln	Ala	Val	
				230					235					240	
Asp	Lys	Leu	Val	Lys	Asp	Val	Asn	Arg	Leu	Lys	Arg	Glu	Ile	Glu	
				245					250					255	
Lys	Arg	Arg	Gly	Ala	Gln	Ile	Gln	Ala	Ala	Arg	Glu	Lys	Asn	Ile	
				260					265					270	
Gln	Lys	Asp	Pro	Gln	Glu	Asn	Ile	Phe	Leu	Cys	Gln	Ala	Leu	Arg	
				275					280					285	
Thr	Phe	Phe	Pro	Asn	Ser	Glu	Phe	Leu	His	Ser	Cys	Val	Met	Ser	
				290					295					300	
Leu	Lys	Asn	Arg	His	Val	Ser	Lys	Ser	Ser	Cys	Asn	Tyr	Asn	His	
				305					310					315	
His	Leu	Asp	Val	Val	Asp	Asn	Leu	Thr	Leu	Met	Val	Glu	His	Thr	
				320					325					330	
Asp	Ile	Pro	Glu	Ala	Ser	Pro	Ala	Ser	Thr	Pro	Gln	Ile	Ile	Lys	
				335					340					345	
His	Lys	Ala	Leu	Asp	Leu	Asp	Asp	Arg	Trp	Gln	Phe	Lys	Arg	Ser	
				350					355					360	
Arg	Leu	Leu	Asp	Thr	Gln	Asp	Lys	Arg	Ser	Lys	Ala	Asn	Thr	Gly	
				365					370					375	
Ser	Ser	Asn	Gln	Asp	Lys	Ala	Ser	Lys	Met	Ser	Ser	Pro	Glu	Thr	
				380					385					390	
Asp	Glu	Glu	Ile	Glu	Lys	Met	Lys	Gly	Phe	Gly	Glu	Tyr	Ser	Arg	
				395					400					405	
Ser	Pro	Thr	Phe												

<210> 159
 <211> 2651
 <212> DNA
 <213> Homo sapiens

<400> 159
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 acgagcggac cagcgcaggg cagcccaagc agcgcgcagc gaacgcccgc 100
 cgccgcccac accctctgcg gtccccggcg cgctgccac ccttccctcc 150
 ttccccgcgt ccccgccctcg ccggccagtc agcttgccgg gttcgctgcc 200
 ccgcgaaacc ccgaggtcac cagcccgcg cttctgcttc ctgggcccgc 250
 cgccgcctcc acgccctcct tctccccctgg ccgggcgcct ggcaccgggg 300
 accgttgctt gacgcgaggg ccagctctac ttttcgcccc gcgtctcctc 350
 cgctgctcg cctcttccac caactccaac tctttctccc tccagctcca 400
 ctgcgtagtc cccgactccg ccagccctcg gcccgctgcc gtagcgccgc 450
 ttcccgctcg gtcccaaagg tgggaacgcg tccgccccgg ccgcacccat 500
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 ccgcgctgct ggctgccgag ctcaagtcca aaagttgctc ggaagtgcga 600
 cgtctttacg tgtccaaagg cttcaacaag aacgatgccc ccctccacga 650
 gatcaacggt gatcatttga agatctgtcc ccagggttct acctgctgct 700
 ctcaagagat ggaggagaag tacagcctgc aaagtaaaga tgatttcaaa 750
 agtgtggtca gcgaacagtg caatcatttg caagctgtct ttgcttcacg 800
 ttacaagaag tttgatgaat tcttcaaaga actacttgaa aatgcagaga 850
 aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900
 aattctgagc tattttaaaga tctcttogta gagttgaaac gttactacgt 950
 ggtgggaaat gtgaacctgg aagaaatgct aaatgacttc tgggctcgcc 1000
 tcctggagcg gatgttccgc ctggtgaact ccagtagcca ctttacagat 1050
 gagtatctgg aatgtgtgag caagtatacg gagcagctga agcccttcgg 1100
 agatgtccct cgcaaattga agctccaggt tactcgtgct tttgtagcag 1150
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 gtctccgtgg taaaccccac agcccagtggt acccatgccc tgttgaagat 1250
 gatctactgc tcccactgcc ggggtctcgt gactgtgaag ccatgttaca 1300
 actactgctc aaacatcatg agaggctggt tggccaacca aggggatctc 1350
 gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400
 gctagagggt cctttcaaca ttgaatcggg catggatccc atcgatgtga 1450

1	5	10	15
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg	20	25	30
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu	35	40	45
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro	50	55	60
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys	65	70	75
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln	80	85	90
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln	95	100	105
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu	110	115	

<210> 166
 <211> 551
 <212> DNA
 <213> Homo sapiens

<400> 166
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 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200
 ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250
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 agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 a 551

<210> 167
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 167
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 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

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Asp Asp Lys Pro Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe					
	35		40		45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala					
	50		55		60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met					
	65		70		75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys					
	80		85		

<210> 168
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 168
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 ggaagcacag ctcagagctg gtctgccatg gacatcctgg tcccactcct 100
 gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggctctgc 150
 tgggctgctg gcagcccctg tgcaaaagct acttccccta cctgatggcc 200
 gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250
 cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300
 tggagctggg ctgcggaacc ggagccaact ttcagttcta cccaccgggc 350
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 gtctgcactc tgggtgctgtg ctctgtgcag agcccaagga aggtcctgca 550
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 gagcccacct ggaaacacat tggggatggc tgctgcctca ccagagagac 700
 ctggaaggat cttgagaacg cccagttctc cgaaatccaa atggaacgac 750
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 ctctctcccc aacctctgcc agggaatat ctaacttcaa tccgccttc 1000
 gacagtga aaagctctact tctacgctga cccagggagg aaacactagg 1050
 accctgttgt atcctcaact gcaagtttct ggactagtct cccaacgttt 1100

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ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300
atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350
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<210> 169

<211> 277

<212> PRT

<213> Homo sapiens

<400> 169

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Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Leu	Gly	Cys	Trp	Gln	Pro	20	25	30	
Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro	35	40	45	
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser	50	55	60	
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu	65	70	75	
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro	80	85	90	
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys	95	100	105	
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu	110	115	120	
Arg	Phe	Val	Val	Ala	Pro	Gly	Glu	Asp	Met	Arg	Gln	Leu	Ala	Asp	125	130	135	
Gly	Ser	Met	Asp	Val	Val	Val	Cys	Thr	Leu	Val	Leu	Cys	Ser	Val	140	145	150	
Gln	Ser	Pro	Arg	Lys	Val	Leu	Gln	Glu	Val	Arg	Arg	Val	Leu	Arg	155	160	165	
Pro	Gly	Gly	Val	Leu	Phe	Phe	Trp	Glu	His	Val	Ala	Glu	Pro	Tyr	170	175	180	
Gly	Ser	Trp	Ala	Phe	Met	Trp	Gln	Gln	Val	Phe	Glu	Pro	Thr	Trp	185	190	195	
Lys	His	Ile	Gly	Asp	Gly	Cys	Cys	Leu	Thr	Arg	Glu	Thr	Trp	Lys	200	205	210	
Asp	Leu	Glu	Asn	Ala	Gln	Phe	Ser	Glu	Ile	Gln	Met	Glu	Arg	Gln	215	220	225	

Pro	Pro	Pro	Leu	Lys	Trp	Leu	Pro	Val	Gly	Pro	His	Ile	Met	Gly
				230					235					240
Lys	Ala	Val	Lys	Gln	Ser	Phe	Pro	Ser	Ser	Lys	Ala	Leu	Ile	Cys
				245					250					255
Ser	Phe	Pro	Ser	Leu	Gln	Leu	Glu	Gln	Ala	Thr	His	Gln	Pro	Ile
				260					265					270
Tyr	Leu	Pro	Leu	Arg	Gly	Thr								
				275										

<210> 170
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 170
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 agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgct 200
 ctcttcttac tggttttgca ccataacttc ctcaagtga gcagtttggt 250
 aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
 ttgtcccaa tgctctccga catgcagtag atgggagaca agaggagatt 350
 cctgtggtca tcgctgcac tgaagacagg cttggggggg ccattgcagc 400
 tataaacagc attcagcaca acactcgctc caatgtgatt ttctacattg 450
 ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgat 500
 tccctgaaaa gcatcagata caaaattgtc aattttgacc ctaaactttt 550
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 gccatataca tggatgatga tgtaattgtg caaggtgata ttcttgccct 700
 ttacaataca gcaactgaagc caggacatgc agctgcattt tcagaagatt 750
 gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800
 aattacattg gctatcttga ctataaaaag gaaagaattc gtaagctttc 850
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 tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950
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 cacaacacct cctctgttta tcgtatttta tcaacagcac tctaccatcg 1050
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 tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

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<210> 171

<211> 371

<212> PRT

<213> Homo sapiens

<400> 171

Met	Ser	Phe	Arg	Lys	Val	Asn	Ile	Ile	Ile	Leu	Val	Leu	Ala	Val
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Ala	Leu	Phe	Leu	Leu	Val	Leu	His	His	Asn	Phe	Leu	Ser	Leu	Ser
				20					25					30
Ser	Leu	Leu	Arg	Asn	Glu	Val	Thr	Asp	Ser	Gly	Ile	Val	Gly	Pro
				35					40					45
Gln	Pro	Ile	Asp	Phe	Val	Pro	Asn	Ala	Leu	Arg	His	Ala	Val	Asp
				50					55					60
Gly	Arg	Gln	Glu	Glu	Ile	Pro	Val	Val	Ile	Ala	Ala	Ser	Glu	Asp
				65					70					75
Arg	Leu	Gly	Gly	Ala	Ile	Ala	Ala	Ile	Asn	Ser	Ile	Gln	His	Asn
				80					85					90
Thr	Arg	Ser	Asn	Val	Ile	Phe	Tyr	Ile	Val	Thr	Leu	Asn	Asn	Thr
				95					100					105
Ala	Asp	His	Leu	Arg	Ser	Trp	Leu	Asn	Ser	Asp	Ser	Leu	Lys	Ser
				110					115					120
Ile	Arg	Tyr	Lys	Ile	Val	Asn	Phe	Asp	Pro	Lys	Leu	Leu	Glu	Gly
				125					130					135
Lys	Val	Lys	Glu	Asp	Pro	Asp	Gln	Gly	Glu	Ser	Met	Lys	Pro	Leu
				140					145					150
Thr	Phe	Ala	Arg	Phe	Tyr	Leu	Pro	Ile	Leu	Val	Pro	Ser	Ala	Lys
				155					160					165
Lys	Ala	Ile	Tyr	Met	Asp	Asp	Asp	Val	Ile	Val	Gln	Gly	Asp	Ile
				170					175					180
Leu	Ala	Leu	Tyr	Asn	Thr	Ala	Leu	Lys	Pro	Gly	His	Ala	Ala	Ala

	185		190		195
Phe Ser Glu Asp Cys Asp Ser Ala Ser Thr Lys Val Val Ile Arg	200		205		210
Gly Ala Gly Asn Gln Tyr Asn Tyr Ile Gly Tyr Leu Asp Tyr Lys	215		220		225
Lys Glu Arg Ile Arg Lys Leu Ser Met Lys Ala Ser Thr Cys Ser	230		235		240
Phe Asn Pro Gly Val Phe Val Ala Asn Leu Thr Glu Trp Lys Arg	245		250		255
Gln Asn Ile Thr Asn Gln Leu Glu Lys Trp Met Lys Leu Asn Val	260		265		270
Glu Glu Gly Leu Tyr Ser Arg Thr Leu Ala Gly Ser Ile Thr Thr	275		280		285
Pro Pro Leu Leu Ile Val Phe Tyr Gln Gln His Ser Thr Ile Asp	290		295		300
Pro Met Trp Asn Val Arg His Leu Gly Ser Ser Ala Gly Lys Arg	305		310		315
Tyr Ser Pro Gln Phe Val Lys Ala Ala Lys Leu Leu His Trp Asn	320		325		330
Gly His Leu Lys Pro Trp Gly Arg Thr Ala Ser Tyr Thr Asp Val	335		340		345
Trp Glu Lys Trp Tyr Ile Pro Asp Pro Thr Gly Lys Phe Asn Leu	350		355		360
Ile Arg Arg Tyr Thr Glu Ile Ser Asn Ile Lys	365		370		

<210> 172

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

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gcattcagca caacactcgn tccaatgtga ttttctacat tgttactctc 250
aacaatacag cagaccatnt ccggtcctgg ntcaacagtg attccctgaa 300
aagcatcaga tacaaaattg tcaattttga ccctaaactt ttggaaggaa 350

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<210> 173
<211> 1866
<212> DNA
<213> Homo sapiens

<400> 173
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aaaaaaaaa aaaaaa 1866

<210> 174
<211> 823
<212> DNA
<213> Homo sapiens

<400> 174
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 ttctcaaaa 1660

<210> 177
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 177
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 Ala Leu Ser Leu Ala Met Met Phe Thr Phe Arg Phe Ile Thr Thr
 20 25 30
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 35 40 45
 Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn
 50 55 60
 Asp Leu Ser Ile Glu Leu Asp Thr Glu Arg Glu Asn Met Lys Cys
 65 70 75
 Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu
 80 85 90
 Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val

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Glu Leu Phe Gln	Ile Thr Asn Lys Ala	Ile Ser Ser Ala Pro	Phe
	110	115	120
Leu Leu Phe Gln	Pro Leu Trp Thr Phe	Ala Ile Leu Ile Phe	Phe
	125	130	135
Trp Val Leu Trp	Val Ala Val Leu Leu	Ser Leu Gly Thr Ala	Gly
	140	145	150
Ala Ala Gln Val	Met Glu Gly Gly Gln	Val Glu Tyr Lys Pro	Leu
	155	160	165
Ser Gly Ile Arg	Tyr Met Trp Ser Tyr	His Leu Ile Gly Leu	Ile
	170	175	180
Trp Thr Ser Glu	Phe Ile Leu Ala Cys	Gln Gln Met Thr Ile	Ala
	185	190	195
Gly Ala Val Val	Thr Cys Tyr Phe Asn	Arg Ser Lys Asn Asp	Pro
	200	205	210
Pro Asp His Pro	Ile Leu Ser Ser Leu	Ser Ile Leu Phe Phe	Tyr
	215	220	225
His Gln Gly Thr	Val Val Lys Gly Ser	Phe Leu Ile Ser Val	Val
	230	235	240
Arg Ile Pro Arg	Ile Ile Val Met Tyr	Met Gln Asn Ala Leu	Lys
	245	250	255
Glu Gln Gln His	Gly Ala Leu Ser Arg	Tyr Leu Phe Arg Cys	Cys
	260	265	270
Tyr Cys Cys Phe	Trp Cys Leu Asp Lys	Tyr Leu Leu His Leu	Asn
	275	280	285
Gln Asn Ala Tyr	Thr Thr Thr Ala Ile	Asn Gly Thr Asp Phe	Cys
	290	295	300
Thr Ser Ala Lys	Asp Ala Phe Lys Ile	Leu Ser Lys Asn Ser	Ser
	305	310	315
His Phe Thr Ser	Ile Asn Cys Phe Gly	Asp Phe Ile Ile Phe	Leu
	320	325	330
Gly Lys Val Leu	Val Val Cys Phe Thr	Val Phe Gly Gly Leu	Met
	335	340	345
Ala Phe Asn Tyr	Asn Arg Ala Phe Gln	Val Trp Ala Val Pro	Leu
	350	355	360
Leu Leu Val Ala	Phe Phe Ala Tyr Leu	Val Ala His Ser Phe	Leu
	365	370	375
Ser Val Phe Glu	Thr Val Leu Asp Ala	Leu Phe Leu Cys Phe	Ala
	380	385	390
Val Asp Leu Glu	Thr Asn Asp Gly Ser	Ser Glu Lys Pro Tyr	Phe
	395	400	405
Met Asp Gln Glu	Phe Leu Ser Phe Val	Lys Arg Ser Asn Lys	Leu

Asn	Asn	Ala	Arg	Ala	Gln	Gln	Asp	Lys	His	Ser	Leu	Arg	Asn	Glu
				425					430					435
Glu	Gly	Thr	Glu	Leu	Gln	Ala	Ile	Val	Arg					
				440					445					

<210> 178
 <211> 2773
 <212> DNA
 <213> Homo sapiens

<400> 178
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 aagggaaaaa gaatattcat tctgtgtggt gaaaattttt tgaaaaaaa 150
 attgccttct tcaaacaagg gtgtcattct gatatttatg aggactgttg 200
 ttctcactat gaaggcatct gttattgaaa tgttccttgt tttgctggtg 250
 actggagtac attcaaaca agaaacggca aagaagatta aaaggcccaa 300
 gttcactgtg cctcagatca actgcgatgt caaagccgga aagatcatcg 350
 atcctgagtt cattgtgaaa tgtccagcag gatgccaaaga ccccaaatac 400
 catgtttatg gcaactgacgt gtatgcaccc tactccagtg tgtgtggcgc 450
 tgccgtacac agtgggtgtgc ttgataattc aggagggaaa atacttggtc 500
 ggaagggttg tggacagtct ggttacaag ggagttattc caacgggtgtc 550
 caatcgttat ccctaccacg atggagagaa tcctttatcg tcttagaaag 600
 taaacccaaa aagggtgtaa cctacccatc agctottaca tactcatcat 650
 cgaaaagtcc agctgcccac gcaggtgaga ccacaaaagc ctatcagagg 700
 ccacctattc cagggacaac tgcacagccg gtcactotga tgcagcttct 750
 ggctgtcact gtagctgtgg ccacccccac caccttgcca aggccatccc 800
 cttctgctgc ttctaccacc agcatcccca gaccacaatc agtgggccac 850
 aggagccagg agatggatct ctggtccact gccacctaca caagcagcca 900
 aaacaggccc agagctgatc caggtatcca aaggcaagat ccttcaggag 950
 ctgccttcca gaaacctgtt ggagcggatg tcagcctggg acttggtcca 1000
 aaagaagaat tgagcacaca gtctttggag ccagtatccc tgggagatcc 1050
 aaactgcaaa attgacttgt cgtttttaat tgatgggagc accagcattg 1100
 gcaaacggcg attccgaatc cagaagcagc tcctggctga tgttgcccaa 1150
 gctcttgaca ttggccctgc cgggtccact atgggtgttg tccagtatgg 1200
 agacaaccct gctactcact ttaacctcaa gacacacacg aattctcgag 1250

<211> 678
 <212> PRT
 <213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met	1	5	10	15
Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr	20	25	30	
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn	35	40	45	
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val	50	55	60	
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly	65	70	75	
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val	80	85	90	
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg	95	100	105	
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly	110	115	120	
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val	125	130	135	
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu	140	145	150	
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr	155	160	165	
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln	170	175	180	
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala	185	190	195	
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr	200	205	210	
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu	215	220	225	
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg	230	235	240	
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala	245	250	255	
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val	260	265	270	
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	275	280	285	
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly				

gaattctaca acattcctca gggatacaca gtggagaagc gagagggcta 1050
 cccacttcgg ccagaactta ttgaaagcgc aatgtacctc taccgtgcca 1100
 cgggggatcc caccctccta gaactcggaa gagatgctgt ggaatccatt 1150
 gaaaaaatca gcaaggtgga gtgcggattt gcaacaatca aagatctgcg 1200
 agaccacaag ctggacaacc gcatggagtc gttcttctctg gccgagactg 1250
 tgaaatacct ctacctcctg tttgacccaa ccaacttcat ccacaacaat 1300
 ggggtccacct tcgacgcggt gatcaccccc tatggggagt gcatcctggg 1350
 ggctggggggg tacatcttca acacagaagc tcaccccatc gaccttgccg 1400
 ccctgcactg ctgccagagg ctgaaggaag agcagtggga ggtggaggac 1450
 ttgatgaggg aattctactc tctcaaacgg agcaggtcga aatttcagaa 1500
 aaacactgtt agttcggggc catgggaacc tccagcaagg ccaggaacac 1550
 tcttctcacc agaaaaccat gaccaggcaa gggagaggaa gcctgccaaa 1600
 cagaaggtcc cacttctcag ctgccccagt cagcccttca cctccaagtt 1650
 ggcatctactg ggacagggtt tcttagactc ctcataacca ctggataatt 1700
 tttttatttt tatttttttg aggctaaact ataataaatt gcttttggct 1750
 atcataaaa 1759

<210> 181
 <211> 541
 <212> PRT
 <213> Homo sapiens

<400> 181
 Met Pro Phe Arg Leu Leu Ile Pro Leu Gly Leu Leu Cys Ala Leu
 1 5 10 15
 Leu Pro Gln His His Gly Ala Pro Gly Pro Asp Gly Ser Ala Pro
 20 25 30
 Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu
 35 40 45
 Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val
 50 55 60
 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn
 65 70 75
 Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu
 80 85 90
 Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala
 95 100 105
 Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala
 110 115 120
 Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

	125		130		135
Tyr Gly Thr Val	Asn Leu Leu His Gly	Val Asn Pro Gly Glu Thr			
	140	145			150
Pro Val Thr Cys	Thr Ala Gly Ile Gly	Thr Phe Ile Val Glu Phe			
	155	160			165
Ala Thr Leu Ser	Ser Leu Thr Gly Asp	Pro Val Phe Glu Asp Val			
	170	175			180
Ala Arg Val Ala	Leu Met Arg Leu Trp	Glu Ser Arg Ser Asp Ile			
	185	190			195
Gly Leu Val Gly	Asn His Ile Asp Val	Leu Thr Gly Lys Trp Val			
	200	205			210
Ala Gln Asp Ala	Gly Ile Gly Ala Gly	Val Asp Ser Tyr Phe Glu			
	215	220			225
Tyr Leu Val Lys	Gly Ala Ile Leu Leu	Gln Asp Lys Lys Leu Met			
	230	235			240
Ala Met Phe Leu	Glu Tyr Asn Lys Ala	Ile Arg Asn Tyr Thr Arg			
	245	250			255
Phe Asp Asp Trp	Tyr Leu Trp Val Gln	Met Tyr Lys Gly Thr Val			
	260	265			270
Ser Met Pro Val	Phe Gln Ser Leu Glu	Ala Tyr Trp Pro Gly Leu			
	275	280			285
Gln Ser Leu Ile	Gly Asp Ile Asp Asn	Ala Met Arg Thr Phe Leu			
	290	295			300
Asn Tyr Tyr Thr	Val Trp Lys Gln Phe	Gly Gly Leu Pro Glu Phe			
	305	310			315
Tyr Asn Ile Pro	Gln Gly Tyr Thr Val	Glu Lys Arg Glu Gly Tyr			
	320	325			330
Pro Leu Arg Pro	Glu Leu Ile Glu Ser	Ala Met Tyr Leu Tyr Arg			
	335	340			345
Ala Thr Gly Asp	Pro Thr Leu Leu Glu	Leu Gly Arg Asp Ala Val			
	350	355			360
Glu Ser Ile Glu	Lys Ile Ser Lys Val	Glu Cys Gly Phe Ala Thr			
	365	370			375
Ile Lys Asp Leu	Arg Asp His Lys Leu	Asp Asn Arg Met Glu Ser			
	380	385			390
Phe Phe Leu Ala	Glu Thr Val Lys Tyr	Leu Tyr Leu Leu Phe Asp			
	395	400			405
Pro Thr Asn Phe	Ile His Asn Asn Gly	Ser Thr Phe Asp Ala Val			
	410	415			420
Ile Thr Pro Tyr	Gly Glu Cys Ile Leu	Gly Ala Gly Gly Tyr Ile			
	425	430			435
Phe Asn Thr Glu	Ala His Pro Ile Asp	Leu Ala Ala Leu His Cys			

	440		445		450
Cys Gln Arg Leu	Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu	Met		
	455		460		465
Arg Glu Phe Tyr	Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln	Lys		
	470		475		480
Asn Thr Val Ser	Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro	Gly		
	485		490		495
Thr Leu Phe Ser	Pro Glu Asn His Asp	Gln Ala Arg Glu Arg	Lys		
	500		505		510
Pro Ala Lys Gln	Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln	Pro		
	515		520		525
Phe Thr Ser Lys	Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp	Ser		
	530		535		540

Ser

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
 aaagttacat tttctctgga actctcctag gccactccct gctgatgcaa 50
 catctggggtt tgggcagaaa ggaggggtgct tcggagcccg ccctttctga 100
 gcttctctggg ccggctctag aacaattcag gcttcgctgc gactcagacc 150
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttattttt ggaaagaaac aatgttctag gtcaaactga gtctaccaa 250
 tgcagacttt cacaatgggt ctagaagaaa tctggacaag tcttttcatg 300
 tggtttttct acgcattgat tccatgtttg ctacacagatg aagtggccat 350
 tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400
 tcttgatgtg gagcccagtg atcgcgctg gagaaacagt gtactattct 450
 gtcgaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500
 cccagcagc tgggtgtcac tcaactgaagg tctgagtgat gatgtcactg 550
 atgacatcac ggccactgtg ccatacaacc ttcgtgtcag ggccacattg 600
 ggctcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650
 ctcaaccatc cttacccgac ctgggatgga gatcaccaaa gatggcttcc 700
 acctgggttat tgagctggag gacctggggc ccagtttga gttccttggtg 750
 gcctactgga ggagggagcc tggtgccgag gaacatgtca aaatgggtgag 800
 gagtgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850

actgtgtgaa ggcccagaca ttctgtgaagg ccattgggag gtacagcgcc 900
 ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca ttcccctggt 950
 actggccctg tttgcctttg ttggcttcat gctgacacct gtggtcgtgc 1000
 cactgttctg ctggaaaatg ggccggctgc tccagtactc ctgttgcccc 1050
 gtggtggtcc tcccagacac cttgaaaata accaattcac cccagaagtt 1100
 aatcagctgc agaagggagg aggtggatgc ctgtgccacg gctgtgatgt 1150
 ctcttgagga actcctcagg gcctggatct cataggtttg cggaagggcc 1200
 caggtgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250
 aagttgtgtt totgttttcc gccacggaca agggatgaga gaagtaggaa 1300
 gagcctgttg tctacaagtc tagaagcaac catcagaggc aggggtggtt 1350
 gtctaacaga aactgactg aggccttaggg gatgtgacct ctagactggg 1400
 ggctgccact tgctggctga gcaaccctgg gaaaagtgc ttcatccctt 1450
 cggtcctaag ttttctcctc tgtaattggg gaattaccta cacacctgct 1500
 aaacacacac acacagagtc totctctata tatacacacg tacacataaa 1550
 tacacccagc acttgcaagg ctagagggaa actggtgaca ctctacagtc 1600
 tgactgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650
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 taatccttga gagaaaagga atcatgggag caatggtgtt gagttcactt 1750
 caagcccaat gccggtgcag aggggaatgg cttagcgagc tctacagtag 1800
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900
 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgctccttt tttctgttgg taaagtacag 2000
 aattcagcaa ataaaaaggg ccaccctggc caaaagcggg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183
 <211> 311
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-29
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu	
1				5					10					15	
Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp	
				20					25					30	
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	
				35					40					45	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	
				50					55					60	
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	
				65					70					75	
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	
				80					85					90	
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	
				95					100					105	
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	
				110					115					120	
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	
				125					130					135	
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	
				140					145					150	
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	
				155					160					165	
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
				170					175					180	
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
				185					190					195	
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
				200					205					210	
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
				215					220					225	

Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe
				230					235					240
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp
				245					250					255
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val
				260					265					270
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile
				275					280					285
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met
				290					295					300
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser				
				305					310					

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
 tcctgctgat gcacatctgg gtttggcaaa aggaggttgc ttcgagccgc 50
 cctttctagc ttcctggccg gctctagaac aattcaggct tcgctgcgac 100
 tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150
 agaatgcttt attttggaaa gaaacaatgt tctaggtcaa actgagtcta 200
 ccaaatgcag actttcacaa tggttctaga agaaatctgg acaagtcttt 250
 tcatgtgggt tttctacgca ttgattccat gtttgctcac agatgaagtg 300
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350
 gcattctctg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400
 attctgtcga ataccagggg gactacgaga gcctgtacac gagccacatc 450
 tggatcccca gcagctggtg ctactcact gaaggtcctg agtgtgatgt 500
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggcca 550
 cattgggctc acagacctca gcctggagca tcctgaagca tccctttaat 600
 agaaactcaa ccattcttac ccgacctggg atggagatca ccaaagatgg 650
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagttcc 700
 ttgtggccta ntggaggagg ggcgaacccc ttgoggcgca aggggttngc 750
 gaaccccttg cggccgctgg ggtatctctc gagaaaagag aggcccaata 800
 tgacccac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggtcggg taaggatggt tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
cggaacgctg ggccgccacc tccggaacaa gccatggtgg cggcgacggt 50
ggcagcggcg tggctgctcc tgtgggctgc ggcctgcgcg cagcaggagc 100
aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
acctgggccc ccaccacttt aacgtgctcg ccttcccctg caaccagttt 300
ggccaacagg agcctgacag caacaaggag attgagagct ttgcccgccg 350
cacctacagt gtctcattcc ccatgtttag caagattgca gtcaccggtg 400
ctggtgcccc tcttgccctc aagtacctgg cccagacttc tgggaaggag 450
cccacctgga acttctggaa gtacctagta gcccagatg gaaaggtggt 500
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga ccccagatca 550
cagcgctcgt gaggaagctc atcctactga agcgagaaga cttataacca 600

ccgcgtctcc tcctccacca cctcatcccg cccacctgtg tggggctgac 650
 caatgcaaac tcaaagtgtg cttcaaaggg agagaccac tgactctcct 700
 tcctttactc ttatgccatt ggtcccatca ttcttgtggg ggaaaaattc 750
 tagtattttg attatttgaa tcttacagca acaaatagga actcctggcc 800
 aatgagagct cttgaccagt gaatcaccag cggatacgaa cgtcttgcca 850
 acaaaaaatgt gtggcaaata gaagtatatc aagcaataat ctcccaccca 900
 aggcttctgt aaactgggac caatgattac ctcatagggc tgttgtgagg 950
 attaggatga aatacctgtg aaagtgccta ggcagtgccg gccaaatagg 1000
 aggcatcaca tgaacatttt ttgcatataa accaaaaaat aacttgttat 1050
 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100
 caaagggtta gttgttggtt tttcctctgt attattttct tcattacaaa 1150
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgatataaaa 1200
 taaaaatgaa agtatcctcc tcaaaaa 1227

<210> 189
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 189
 Met Val Ala Ala Thr Val Ala Ala Ala Trp Leu Leu Leu Trp Ala
 1 5 10 15
 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala
 20 25 30
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly
 35 40 45
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr
 50 55 60
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly
 65 70 75
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly
 80 85 90
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg
 95 100 105
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val
 110 115 120
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr
 125 130 135
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala
 140 145 150
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

	155	160	165
Glu Glu Val Arg	Pro Gln Ile Thr Ala	Leu Val Arg Lys Leu	Ile
	170	175	180
Leu Leu Lys Arg	Glu Asp Leu		
	185		

<210> 190
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 190
 gcaggacttc tacgacttca aggc 24

<210> 191
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 191
 agtctgggcc aggtacttga aggc 24

<210> 192
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 192
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<210> 193
 <211> 2187
 <212> DNA
 <213> Homo sapiens

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<210> 194

<211> 615

<212> PRT

<213> Homo sapiens

<400> 194

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				20					25					30	
Trp	Gln	Glu	Ala	Arg	Leu	Gln	Gly	Val	Arg	Phe	Leu	Ser	Ser	Arg	
				35					40					45	
Glu	Val	Asp	Arg	Met	Val	Ser	Thr	Pro	Ile	Gly	Gly	Leu	Ser	Tyr	
				50					55					60	
Val	Gln	Gly	Cys	Thr	Lys	Lys	His	Leu	Asn	Ser	Lys	Thr	Val	Gly	
				65					70					75	
Gln	Cys	Leu	Glu	Thr	Thr	Ala	Gln	Arg	Val	Pro	Glu	Arg	Glu	Ala	
				80					85					90	
Leu	Val	Val	Leu	His	Glu	Asp	Val	Arg	Leu	Thr	Phe	Ala	Gln	Leu	
				95					100					105	
Lys	Glu	Glu	Val	Asp	Lys	Ala	Ala	Ser	Gly	Leu	Leu	Ser	Ile	Gly	
				110					115					120	
Leu	Cys	Lys	Gly	Asp	Arg	Leu	Gly	Met	Trp	Gly	Pro	Asn	Ser	Tyr	
				125					130					135	
Ala	Trp	Val	Leu	Met	Gln	Leu	Ala	Thr	Ala	Gln	Ala	Gly	Ile	Ile	
				140					145					150	
Leu	Val	Ser	Val	Asn	Pro	Ala	Tyr	Gln	Ala	Met	Glu	Leu	Glu	Tyr	
				155					160					165	
Val	Leu	Lys	Lys	Val	Gly	Cys	Lys	Ala	Leu	Val	Phe	Pro	Lys	Gln	
				170					175					180	
Phe	Lys	Thr	Gln	Gln	Tyr	Tyr	Asn	Val	Leu	Lys	Gln	Ile	Cys	Pro	
				185					190					195	
Glu	Val	Glu	Asn	Ala	Gln	Pro	Gly	Ala	Leu	Lys	Ser	Gln	Arg	Leu	
				200					205					210	
Pro	Asp	Leu	Thr	Thr	Val	Ile	Ser	Val	Asp	Ala	Pro	Leu	Pro	Gly	
				215					220					225	
Thr	Leu	Leu	Leu	Asp	Glu	Val	Val	Ala	Ala	Gly	Ser	Thr	Arg	Gln	
				230					235					240	
His	Leu	Asp	Gln	Leu	Gln	Tyr	Asn	Gln	Gln	Phe	Leu	Ser	Cys	His	

	245	250	255
Asp Pro Ile Asn	Ile Gln Phe Thr Ser	Gly Thr Thr Gly Ser	Pro
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Lys Gly Ala Thr	Leu Ser His Tyr Asn	Ile Val Asn Asn Ser	Asn
	275	280	285
Ile Leu Gly Glu	Arg Leu Lys Leu His	Glu Lys Thr Pro Glu	Gln
	290	295	300
Leu Arg Met Ile	Leu Pro Asn Pro Leu	Tyr His Cys Leu Gly	Ser
	305	310	315
Val Ala Gly Thr	Met Met Cys Leu Met	Tyr Gly Ala Thr Leu	Ile
	320	325	330
Leu Ala Ser Pro	Ile Phe Asn Gly Lys	Lys Ala Leu Glu Ala	Ile
	335	340	345
Ser Arg Glu Arg	Gly Thr Phe Leu Tyr	Gly Thr Pro Thr Met	Phe
	350	355	360
Val Asp Ile Leu	Asn Gln Pro Asp Phe	Ser Ser Tyr Asp Ile	Ser
	365	370	375
Thr Met Cys Gly	Gly Val Ile Ala Gly	Ser Pro Ala Pro Pro	Glu
	380	385	390
Leu Ile Arg Ala	Ile Ile Asn Lys Ile	Asn Met Lys Asp Leu	Val
	395	400	405
Val Ala Tyr Gly	Thr Thr Glu Asn Ser	Pro Val Thr Phe Ala	His
	410	415	420
Phe Pro Glu Asp	Thr Val Glu Gln Lys	Ala Glu Ser Val Gly	Arg
	425	430	435
Ile Met Pro His	Thr Glu Ala Arg Ile	Met Asn Met Glu Ala	Gly
	440	445	450
Thr Leu Ala Lys	Leu Asn Thr Pro Gly	Glu Leu Cys Ile Arg	Gly
	455	460	465
Tyr Cys Val Met	Leu Gly Tyr Trp Gly	Glu Pro Gln Lys Thr	Glu
	470	475	480
Glu Ala Val Asp	Gln Asp Lys Trp Tyr	Trp Thr Gly Asp Val	Ala
	485	490	495
Thr Met Asn Glu	Gln Gly Phe Cys Lys	Ile Val Gly Arg Ser	Lys
	500	505	510
Asp Met Ile Ile	Arg Gly Gly Glu Asn	Ile Tyr Pro Ala Glu	Leu
	515	520	525
Glu Asp Phe Phe	His Thr His Pro Lys	Val Gln Glu Val Gln	Val
	530	535	540
Val Gly Val Lys	Asp Asp Arg Met Gly	Glu Glu Ile Cys Ala	Cys
	545	550	555
Ile Arg Leu Lys	Asp Gly Glu Glu Thr	Thr Val Glu Glu Ile	Lys

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<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

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			20					25					30	
Leu	Glu	Cys	Tyr	Ser	Cys	Val	Gln	Lys	Ala	Asp	Asp	Gly	Cys	Ser

				35					40					45
Pro	Asn	Lys	Met	Lys 50	Thr	Val	Lys	Cys	Ala 55	Pro	Gly	Val	Asp	Val 60
Cys	Thr	Glu	Ala	Val 65	Gly	Ala	Val	Glu	Thr 70	Ile	His	Gly	Gln	Phe 75
Ser	Leu	Ala	Val	Arg 80	Gly	Cys	Gly	Ser	Gly 85	Leu	Pro	Gly	Lys	Asn 90
Asp	Arg	Gly	Leu	Asp 95	Leu	His	Gly	Leu	Leu 100	Ala	Phe	Ile	Gln	Leu 105
Gln	Gln	Cys	Ala	Gln 110	Asp	Arg	Cys	Asn	Ala 115	Lys	Leu	Asn	Leu	Thr 120
Ser	Arg	Ala	Leu	Asp 125	Pro	Ala	Gly	Asn	Glu 130	Ser	Ala	Tyr	Pro	Pro 135
Asn	Gly	Val	Glu	Cys 140	Tyr	Ser	Cys	Val	Gly 145	Leu	Ser	Arg	Glu	Ala 150
Cys	Gln	Gly	Thr	Ser 155	Pro	Pro	Val	Val	Ser 160	Cys	Tyr	Asn	Ala	Ser 165
Asp	His	Val	Tyr	Lys 170	Gly	Cys	Phe	Asp	Gly 175	Asn	Val	Thr	Leu	Thr 180
Ala	Ala	Asn	Val	Thr 185	Val	Ser	Leu	Pro	Val 190	Arg	Gly	Cys	Val	Gln 195
Asp	Glu	Phe	Cys	Thr 200	Arg	Asp	Gly	Val	Thr 205	Gly	Pro	Gly	Phe	Thr 210
Leu	Ser	Gly	Ser	Cys 215	Cys	Gln	Gly	Ser	Arg 220	Cys	Asn	Ser	Asp	Leu 225
Arg	Asn	Lys	Thr	Tyr 230	Phe	Ser	Pro	Arg	Ile 235	Pro	Pro	Leu	Val	Arg 240
Leu	Pro	Pro	Pro	Glu 245	Pro	Thr	Thr	Val	Ala 250	Ser	Thr	Thr	Ser	Val 255
Thr	Thr	Ser	Thr	Ser 260	Ala	Pro	Val	Arg	Pro 265	Thr	Ser	Thr	Thr	Lys 270
Pro	Met	Pro	Ala	Pro 275	Thr	Ser	Gln	Thr	Pro 280	Arg	Gln	Gly	Val	Glu 285
His	Glu	Ala	Ser	Arg 290	Asp	Glu	Glu	Pro	Arg 295	Leu	Thr	Gly	Gly	Ala 300
Ala	Gly	His	Gln	Asp 305	Arg	Ser	Asn	Ser	Gly 310	Gln	Tyr	Pro	Ala	Lys 315
Gly	Gly	Pro	Gln	Gln 320	Pro	His	Asn	Lys	Gly 325	Cys	Val	Ala	Pro	Thr 330
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Leu														

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<210> 198
<211> 1657
<212> DNA
<213> Homo sapiens
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<210> 199
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 199
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 His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala
 35 40 45
 Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg
 50 55 60
 Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu
 65 70 75
 Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro
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 Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp
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 Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala
 110 115 120

<210> 200
 <211> 415
 <212> DNA
 <213> Homo sapiens

<400> 200
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<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

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Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn
          35           40           45

Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala
          50           55           60

Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg
          65           70           75

Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly
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Leu Arg Ser Ala Thr Pro Asp Ala Gln
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<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

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cagcaggagt ctcccagggt gttcttctcc agccagttcc aactcaggag 150

acaggtccca aggccatggg agatctctcc tgtgggtttg ccggccactc 200

atgagagtgt ttttgtgtaa agtatttttt agaatactgt tgacttcttc 250

atgatttaat aaccatcctt tgcgaagttt tatgaggcct taggggaatg 300

tcaaccctca aatttttggt atactagatg gcttccattht acccaccact 350

attttaaggt ccctttattht ttaggttcaa ggttcatttg acttgagaaa 400

gtgcccttct gcagcttcat tgattttggt tatotttact attaattgta 450

acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500

cctgggtgcc cctgacacat ttatgtagtg atcccacaaa tgtgattggt 550

aatttaaatg ttatttctaat attagtacat tcagttgtga tgtaatatga 600

ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650

atttgatatg aaagactgaa tagtgatg 678
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<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
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 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
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 Cys Gly Phe Ala Gly His Ser
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<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
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<210> 205
 <211> 392
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val
 50 55 60
 Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys
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<211> 1425
<212> DNA
<213> Homo sapiens

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<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207

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Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp	35	40	45	
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Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Phe	Val	Gly	65	70	75		
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser	80	85	90	
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr	95	100	105	
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro	110	115	120	
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr	125	130	135	
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu	140	145	150	
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Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro	170	175	180	
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu	185	190	195	
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val	200	205	210	
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr	215	220	225	
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg	230	235	240	
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg	245	250	255	
Pro	Gln	Asp	Gly	Glu	Ala	Glu	260											

<210> 208
 <211> 2095
 <212> DNA

Table 1. Demographic characteristics of the study population	
Age (years)	Mean (SD)
Male	55.2 (10.5)
Female	56.8 (11.2)
Marital status	
Married	78.5%
Single	12.3%
Divorced	8.2%
Widowed	1.0%
Education (years)	Mean (SD)
Male	12.5 (2.1)
Female	11.8 (2.5)
Occupation	
Professional	35.2%
Managerial	22.1%
Skilled	18.7%
Unskilled	24.0%
Health status	
Good	65.3%
Fair	28.9%
Poor	5.8%
Smoking status	
Smoker	32.1%
Non-smoker	67.9%
Alcohol consumption	
Regular	15.4%
Occasional	28.7%
Never	55.9%
Family size	Mean (SD)
Male	3.2 (1.5)
Female	3.5 (1.8)
Income (USD/month)	Mean (SD)
Male	1250 (350)
Female	1180 (320)
Health insurance	
Yes	89.2%
No	10.8%
Comorbidities	
Hypertension	45.1%
Diabetes	32.5%
Cholesterol	28.9%
Arthritis	18.7%
Depression	12.3%
Other	5.5%

 \angle \angle

Val	Thr	Glu	Phe	Cys	Pro	Asn	Ala	Lys	Tyr	Val	Met	Lys	Thr	Asp	170	175	180
Thr	Asp	Val	Phe	Ile	Asn	Thr	Gly	Asn	Leu	Val	Lys	Tyr	Leu	Leu	185	190	195
Asn	Leu	Asn	His	Ser	Glu	Lys	Phe	Phe	Thr	Gly	Tyr	Pro	Leu	Ile	200	205	210
Asp	Asn	Tyr	Ser	Tyr	Arg	Gly	Phe	Tyr	Gln	Lys	Thr	His	Ile	Ser	215	220	225
Tyr	Gln	Glu	Tyr	Pro	Phe	Lys	Val	Phe	Pro	Pro	Tyr	Cys	Ser	Gly	230	235	240
Leu	Gly	Tyr	Ile	Met	Ser	Arg	Asp	Leu	Val	Pro	Arg	Ile	Tyr	Glu	245	250	255
Met	Met	Gly	His	Val	Lys	Pro	Ile	Lys	Phe	Glu	Asp	Val	Tyr	Val	260	265	270
Gly	Ile	Cys	Leu	Asn	Leu	Leu	Lys	Val	Asn	Ile	His	Ile	Pro	Glu	275	280	285
Asp	Thr	Asn	Leu	Phe	Phe	Leu	Tyr	Arg	Ile	His	Leu	Asp	Val	Cys	290	295	300
Gln	Leu	Arg	Arg	Val	Ile	Ala	Ala	His	Gly	Phe	Ser	Ser	Lys	Glu	305	310	315
Ile	Ile	Thr	Phe	Trp	Gln	Val	Met	Leu	Arg	Asn	Thr	Thr	Cys	His	320	325	330

Tyr

<210> 210
 <211> 745
 <212> DNA
 <213> Homo sapiens

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<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

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Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu
				20					25					30
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
				35					40					45
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg
				50					55					60
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu
				65					70					75
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala
				80					85					90
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly
				95					100					105
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys
				110					115					120
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys
				125					130					135
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn
				140					145					150
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala
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Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr
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Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr
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Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro
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Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys

275

280

285

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<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

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<400> 214

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<211> 1807

<212> DNA

<213> Homo sapiens

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<210> 216

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	320	325	330
Arg Pro His Leu	Gln Ala Tyr Leu Cys	Leu Ala Lys Ala Arg	Val
	335	340	345
Glu Gln Leu Arg	Arg Glu Ala Gly Arg	Ile Glu Ala Arg Glu	Ile
	350	355	360
Gln Gln Arg Val	Val Arg Val Tyr Cys	Tyr Val Thr Val Val	Ser
	365	370	375
Leu Gln Tyr Leu	Thr Pro Leu Ile Leu	Thr Leu Asn Cys Thr	Leu
	380	385	390
Leu Leu Lys Thr	Leu Gly Gly Tyr Ser	Trp Gly Leu Gly Pro	Ala
	395	400	405
Pro Leu Leu Ser	Pro Asp Pro Ser Ser	Ala Ser Ala Ala Pro	Ile
	410	415	420
Gly Ser Gly Glu	Asp Glu Val Gln Gln	Thr Ala Ala Arg Ile	Ala
	425	430	435
Gly Ala Leu Gly	Gly Leu Leu Thr Pro	Leu Phe Leu Arg Gly	Val
	440	445	450
Leu Ala Tyr Leu	Ile Trp Trp Thr Ala	Ala Cys Gln Leu Leu	Ala
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 <222> 5, 146
 <223> unknown base

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<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

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<210> 220
 <211> 773
 <212> DNA
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 <211> 184
 <212> PRT
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<400> 221
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 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
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<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

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				20					25					30

Ile	Ala	Tyr	Lys	Val	Leu	Glu	Val	Phe	Pro	Lys	Gly	Arg	Trp	Val
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Leu	Ile	Thr	Cys	Cys	Ala	Pro	Gln	Pro	Pro	Pro	Pro	Ile	Thr	Tyr
				50					55					60

Ser	Leu	Cys	Gly	Thr	Lys	Asn	Ile	Lys	Val	Ala	Lys	Lys	Val	Val
				65					70					75

Lys	Thr	His	Glu	Pro	Ala	Ser	Phe	Asn	Leu	Asn	Val	Thr	Leu	Lys
				80					85					90

Ser	Ser	Pro	Asp	Leu	Leu	Thr	Tyr	Phe	Cys	Arg	Ala	Ser	Ser	Thr
				95					100					105

Ser	Gly	Ala	His	Val	Asp	Ser	Ala	Arg	Leu	Gln	Met	His	Trp	Glu
				110					115					120

Leu	Trp	Ser	Lys	Pro	Val	Ser	Glu	Leu	Arg	Ala	Asn	Phe	Thr	Leu
				125					130					135

Gln	Asp	Arg	Gly	Ala	Gly	Pro	Arg	Val	Glu	Met	Ile	Cys	Gln	Ala
				140					145					150

Ser	Ser	Gly	Ser	Pro	Pro	Ile	Thr	Asn	Ser	Leu	Ile	Gly	Lys	Asp
				155					160					165

Gly	Gln	Val	His	Leu	Gln	Gln	Arg	Pro	Cys	His	Arg	Gln	Pro	Ala
				170					175					180

Asn	Phe	Ser	Phe	Leu	Pro	Ser	Gln	Thr	Ser	Asp	Trp	Phe	Trp	Cys
				185					190					195

Gln	Ala	Ala	Asn	Asn	Ala	Asn	Val	Gln	His	Ser	Ala	Leu	Thr	Val
				200					205					210

Val	Pro	Pro	Gly	Gly	Asp	Gln	Lys	Met	Glu	Asp	Trp	Gln	Gly	Pro
				215					220					225

Leu	Glu	Ser	Pro	Ile	Leu	Ala	Leu	Pro	Leu	Tyr	Arg	Ser	Thr	Arg
				230					235					240

Arg	Leu	Ser	Glu	Glu	Glu	Phe	Gly	Gly	Phe	Arg	Ile	Gly	Asn	Gly
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Glu	Val	Arg	Gly	Arg	Lys	Ala	Ala	Ala	Met
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 <211> 1297
 <212> DNA
 <213> Homo sapiens

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<210> 225
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 <213> Homo sapiens

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<210> 226
<211> 735
<212> DNA
<213> Homo sapiens
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caagttatat	accgtggaat	ggagttgatc	ccaaccataa	catcgtggag	150

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<211> 115
<212> PRT
<213> Homo sapiens

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35 40 45
Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys
50 55 60
Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr
65 70 75
Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu
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<210> 228
<211> 2185
<212> DNA
<213> Homo sapiens

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 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100
 ttcttgtata tgcttatata ttaagtctat gggctgggta aaaaaaacag 2150
 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229
 <211> 653
 <212> PRT
 <213> Homo sapiens

<400> 229
 Met Lys Leu Leu Trp Gln Val Thr Val His His His Thr Trp Asn
 1 5 10 15
 Ala Ile Leu Leu Pro Phe Val Tyr Leu Thr Ala Gln Val Trp Ile
 20 25 30
 Leu Cys Ala Ala Ile Ala Ala Ala Ala Ser Ala Gly Pro Gln Asn
 35 40 45
 Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val Val
 50 55 60
 Cys Thr Arg Arg Gly Leu Ser Glu Val Pro Gln Gly Ile Pro Ser
 65 70 75
 Asn Thr Arg Tyr Leu Asn Leu Met Glu Asn Asn Ile Gln Met Ile
 80 85 90
 Gln Ala Asp Thr Phe Arg His Leu His His Leu Glu Val Leu Gln
 95 100 105
 Leu Gly Arg Asn Ser Ile Arg Gln Ile Glu Val Gly Ala Phe Asn
 110 115 120
 Gly Leu Ala Ser Leu Asn Thr Leu Glu Leu Phe Asp Asn Trp Leu
 125 130 135
 Thr Val Ile Pro Ser Gly Ala Phe Glu Tyr Leu Ser Lys Leu Arg
 140 145 150
 Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser Tyr
 155 160 165
 Ala Phe Asn Arg Val Pro Ser Leu Met Arg Leu Asp Leu Gly Glu
 170 175 180
 Leu Lys Lys Leu Glu Tyr Ile Ser Glu Gly Ala Phe Glu Gly Leu

	185	190	195
Phe Asn Leu Lys	Tyr Leu Asn Leu Gly	Met Cys Asn Ile Lys	Asp
	200	205	210
Met Pro Asn Leu	Thr Pro Leu Val Gly	Leu Glu Glu Leu Glu	Met
	215	220	225
Ser Gly Asn His	Phe Pro Glu Ile Arg	Pro Gly Ser Phe His	Gly
	230	235	240
Leu Ser Ser Leu	Lys Lys Leu Trp Val	Met Asn Ser Gln Val	Ser
	245	250	255
Leu Ile Glu Arg	Asn Ala Phe Asp Gly	Leu Ala Ser Leu Val	Glu
	260	265	270
Leu Asn Leu Ala	His Asn Asn Leu Ser	Ser Leu Pro His Asp	Leu
	275	280	285
Phe Thr Pro Leu	Arg Tyr Leu Val Glu	Leu His Leu His His	Asn
	290	295	300
Pro Trp Asn Cys	Asp Cys Asp Ile Leu	Trp Leu Ala Trp Trp	Leu
	305	310	315
Arg Glu Tyr Ile	Pro Thr Asn Ser Thr	Cys Cys Gly Arg Cys	His
	320	325	330
Ala Pro Met His	Met Arg Gly Arg Tyr	Leu Val Glu Val Asp	Gln
	335	340	345
Ala Ser Phe Gln	Cys Ser Ala Pro Phe	Ile Met Asp Ala Pro	Arg
	350	355	360
Asp Leu Asn Ile	Ser Glu Gly Arg Met	Ala Glu Leu Lys Cys	Arg
	365	370	375
Thr Pro Pro Met	Ser Ser Val Lys Trp	Leu Leu Pro Asn Gly	Thr
	380	385	390
Val Leu Ser His	Ala Ser Arg His Pro	Arg Ile Ser Val Leu	Asn
	395	400	405
Asp Gly Thr Leu	Asn Phe Ser His Val	Leu Leu Ser Asp Thr	Gly
	410	415	420
Val Tyr Thr Cys	Met Val Thr Asn Val	Ala Gly Asn Ser Asn	Ala
	425	430	435
Ser Ala Tyr Leu	Asn Val Ser Thr Ala	Glu Leu Asn Thr Ser	Asn
	440	445	450
Tyr Ser Phe Phe	Thr Thr Val Thr Val	Glu Thr Thr Glu Ile	Ser
	455	460	465
Pro Glu Asp Thr	Thr Arg Lys Tyr Lys	Pro Val Pro Thr Thr	Ser
	470	475	480
Thr Gly Tyr Gln	Pro Ala Tyr Thr Thr	Ser Thr Thr Val Leu	Ile
	485	490	495
Gln Thr Thr Arg	Val Pro Lys Gln Val	Ala Val Pro Ala Thr	Asp

500	505	510
Thr Thr Asp Lys Met Gln Thr Ser Leu	Asp Glu Val Met Lys Thr	
515	520	525
Thr Lys Ile Ile Ile Gly Cys Phe Val	Ala Val Thr Leu Leu Ala	
530	535	540
Ala Ala Met Leu Ile Val Phe Tyr Lys	Leu Arg Lys Arg His Gln	
545	550	555
Gln Arg Ser Thr Val Thr Ala Ala Arg	Thr Val Glu Ile Ile Gln	
560	565	570
Val Asp Glu Asp Ile Pro Ala Ala Thr	Ser Ala Ala Ala Thr Ala	
575	580	585
Ala Pro Ser Gly Val Ser Gly Glu Gly	Ala Val Val Leu Pro Thr	
590	595	600
Ile His Asp His Ile Asn Tyr Asn Thr	Tyr Lys Pro Ala His Gly	
605	610	615
Ala His Trp Thr Glu Asn Ser Leu Gly	Asn Ser Leu His Pro Thr	
620	625	630
Val Thr Thr Ile Ser Glu Pro Tyr Ile	Ile Gln Thr His Thr Lys	
635	640	645
Asp Lys Val Gln Glu Thr Gln Ile		
650		

<210> 230
 <211> 2846
 <212> DNA
 <213> Homo sapiens

<400> 230
 cgctcgggca ccagccgcgg caaggatgga gctgggttgc tggacgcagt 50
 tggggctcac ttttcttcag ctctttctca tctcgtcctt gccaaagagag 100
 tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150
 tcgggagtgc tgtgaatatg atcagattga gtgcgtctgc cccggaaaga 200
 gggaagtctg gggttatacc atcccttgct gcaggaatga ggagaatgag 250
 tgtgactcct gctgatcca cccagggttg accatctttg aaaactgcaa 300
 gagctgccga aatggctcat gggggggtac cttggatgac ttctatgtga 350
 aggggttcta ctgtgcagag tgccgagcag gctggtacgg aggagactgc 400
 atgcgatgtg gccaggttct gcgagcccca aagggtcaga ttttgttgga 450
 aagctatccc ctaaagtctc actgtgaatg gaccattcat gctaaacctg 500
 ggtttgtcat ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550
 atgtgccagt atgactatgt tgaggttcgt gatggagaca accgcgatgg 600
 ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataggatc ctcactccac gtcctcttcc actccgatgg ctccaagaat 700
 tttgacggtt tccatgccat ttatgaggag atcacagcat gctcctcatc 750
 cccttgtttc catgacggca cgtgcgtcct tgacaaggct ggatcttaca 800
 agtgtgcctg cttggcaggc tatactgggc agcgcctgtga aaatctcctt 850
 gaagaaagaa actgctcaga ccctgggggc ccagtcaatg ggtaccagaa 900
 aataacaggg ggccctgggc ttatcaacgg acgccatgct aaaattggca 950
 ccgtggtgtc tttcttttgt aacaactcct atgttcttag tggcaatgag 1000
 aaaagaactt gccagcagaa tggagagtgg tcagggaaac agcccatctg 1050
 cataaaagcc tgccgagaac caaagatttc agacctggtg agaaggagag 1100
 ttcttccgat gcaggttcag tcaagggaga caccattaca ccagctatac 1150
 tcagcggcct tcagcaagca gaaactgcag agtgccccta ccaagaagcc 1200
 agcccttccc tttggagatc tgcccatggg ataccaacat ctgcataccc 1250
 agctccagta tgagtgcac tcacccttct accgccgcct gggcagcagc 1300
 aggaggacat gtctgaggac tgggaagtgg agtgggcggg caccatcctg 1350
 catccctatc tgcgggaaaa ttgagaacat cactgctcca aagacccaag 1400
 ggttgcgctg gccgtggcag gcagccatct acaggaggac cagcggggtg 1450
 catgacggca gcctacacaa gggagcgtgg ttcctagtct gcagcgggtg 1500
 cctggtgaat gagcgactg tgggtggtggc tgcccactgt gttactgacc 1550
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gaatgccatc agcttgacca gggaagatct gggcttcatg aggccccttt 2550
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gtccttttcc ttccccatct cttgtacaca ttttaataaa ataagggttg 2700
gcttctgaac tacaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2800
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 231
<211> 720
<212> PRT
<213> Homo sapiens

<400> 231
Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Phe Leu Gln
1 5 10 15
Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn
20 25 30
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
35 40 45
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
50 55 60
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
65 70 75
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
80 85 90
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
95 100 105
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
110 115 120
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
125 130 135
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
140 145 150
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
155 160 165

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn
				485					490					495
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly
				500					505					510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly
				515					520					525
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser
				530					535					540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile
				545					550					555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala
				560					565					570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg
				575					580					585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly
				590					595					600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp
				605					610					615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys
				620					625					630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp
				635					640					645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile
				650					655					660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly
				665					670					675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser
				680					685					690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe
				695					700					705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys
				710					715					720

<210> 232
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 232
 aggttcgtga tggagacaac cgcg 24

<210> 233
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 233
tgtcaaggac gcactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gtcctatcc 50

<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50
agctcaactt gaagctttct tgcctgcagt gaagcagaga gatagatatt 100
attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150
caaattccga ttactgttgc tgttgacttt gtgcctgaca gtggttgggt 200
gggccaccag taactacttc gtgggtgcca ttcaagagat tcctaaagca 250
aaggagtcca tggctaattt ccataagacc ctcatcttgg ggaagggaaa 300
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450
ccggtatcgc cctcaggaat gtaaagcttt acagagggtc gccatcctcg 500
ttccccaccg gaacagagag aaacacctga tgtacctgct ggaacatctg 550
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700
gtggacctgg tacccgagaa tgactttaac ctttacaagt gtgaggagca 750
tccaagcat ctggtggttg gcaggaacag cactgggtac aggttacgtt 800
acagtggata ttttgggggt gttactgccc taagcagaga gcagtttttc 850
aagggtgaatg gattctctaa caactactgg ggatggggag gcgaagacga 900
tgacctcaga ctcagggttg agctccaaag aatgaaaatt tcccggcccc 950
tgcctgaagt gggtaaatat acaatggtct tccacactag agacaaaggc 1000

aatgaggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050
 ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgttg 1100
 aacacaatcc tttatatatc aacatcacag tggattttctg gtttggtgca 1150
 tgaccctgga tcttttggtg atgtttggaa gaactgattc tttgtttgca 1200
 ataatttttg cctagagact tcaaatagta gcacacatta agaacctgtt 1250
 acagctcatt gttgagctga atttttcctt tttgtatttt cttagcagag 1300
 ctcttggtga tgtagagtat aaaacagttg taacaagaca gctttcttag 1350
 tcattttgat catgaggggt aaatattgta atatggatac ttgaaggact 1400
 ttatataaaa ggatgactca aaggataaaa tgaacgctat ttgaggactc 1450
 tgggtgaagg agatttattt aaatttgaag taatatatta tgggataaaa 1500
 ggccacagga aataagactg ctgaatgtct gagagaacca gagttgttct 1550
 cgtccaaggt agaaaggtag gaagatacaa tactgttatt cttttatcct 1600
 gtacaatcat ctgtgaagtg gtggtgtcag gtgagaaggc gtccacaaaa 1650
 gaggggagaa aaggcgacga atcaggacac agtgaacttg ggaatgaaga 1700
 ggtagcagga ggggtggagtg tcggctgcaa aggcagcagt agctgagctg 1750
 gttgcaggtg ctgatagcct tcaggggagg acctgcccag gtatgccttc 1800
 cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850
 tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
 acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950
 gtgaaaaagc aaaa 1964

<210> 236
 <211> 344
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-27
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 4-7, 220-223, 335-338
 <223> N-glycosylation sites

<220>
 <221> Xylose isomerase proteins
 <222> 191-201
 <223> Xylose isomerase proteins

<400> 236
 Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu
 1 5 10 15

Leu	Leu	Leu	Leu	Thr 20	Leu	Cys	Leu	Thr	Val 25	Val	Gly	Trp	Ala	Thr 30
Ser	Asn	Tyr	Phe	Val 35	Gly	Ala	Ile	Gln	Glu 40	Ile	Pro	Lys	Ala	Lys 45
Glu	Phe	Met	Ala	Asn 50	Phe	His	Lys	Thr	Leu 55	Ile	Leu	Gly	Lys	Gly 60
Lys	Thr	Leu	Thr	Asn 65	Glu	Ala	Ser	Thr	Lys 70	Lys	Val	Glu	Leu	Asp 75
Asn	Cys	Pro	Ser	Val 80	Ser	Pro	Tyr	Leu	Arg 85	Gly	Gln	Ser	Lys	Leu 90
Ile	Phe	Lys	Pro	Asp 95	Leu	Thr	Leu	Glu	Glu 100	Val	Gln	Ala	Glu	Asn 105
Pro	Lys	Val	Ser	Arg 110	Gly	Arg	Tyr	Arg	Pro 115	Gln	Glu	Cys	Lys	Ala 120
Leu	Gln	Arg	Val	Ala 125	Ile	Leu	Val	Pro	His 130	Arg	Asn	Arg	Glu	Lys 135
His	Leu	Met	Tyr	Leu 140	Leu	Glu	His	Leu	His 145	Pro	Phe	Leu	Gln	Arg 150
Gln	Gln	Leu	Asp	Tyr 155	Gly	Ile	Tyr	Val	Ile 160	His	Gln	Ala	Glu	Gly 165
Lys	Ly's	Phe	Asn	Arg 170	Ala	Lys	Leu	Leu	Asn 175	Val	Gly	Tyr	Leu	Glu 180
Ala	Leu	Lys	Glu	Glu 185	Asn	Trp	Asp	Cys	Phe 190	Ile	Phe	His	Asp	Val 195
Asp	Leu	Val	Pro	Glu 200	Asn	Asp	Phe	Asn	Leu 205	Tyr	Lys	Cys	Glu	Glu 210
His	Pro	Lys	His	Leu 215	Val	Val	Gly	Arg	Asn 220	Ser	Thr	Gly	Tyr	Arg 225
Leu	Arg	Tyr	Ser	Gly 230	Tyr	Phe	Gly	Gly	Val 235	Thr	Ala	Leu	Ser	Arg 240
Glu	Gln	Phe	Phe	Lys 245	Val	Asn	Gly	Phe	Ser 250	Asn	Asn	Tyr	Trp	Gly 255
Trp	Gly	Gly	Glu	Asp 260	Asp	Asp	Leu	Arg	Leu 265	Arg	Val	Glu	Leu	Gln 270
Arg	Met	Lys	Ile	Ser 275	Arg	Pro	Leu	Pro	Glu 280	Val	Gly	Lys	Tyr	Thr 285
Met	Val	Phe	His	Thr 290	Arg	Asp	Lys	Gly	Asn 295	Glu	Val	Asn	Ala	Glu 300
Arg	Met	Lys	Leu	Leu 305	His	Gln	Val	Ser	Arg 310	Val	Trp	Arg	Thr	Asp 315
Gly	Leu	Ser	Ser	Cys 320	Ser	Tyr	Lys	Leu	Val 325	Ser	Val	Glu	His	Asn 330

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
 335 340

<210> 237
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 237
 ccttacctca gaggccagag caagc 25

<210> 238
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 238
 gagcttcacgc cgttctgcgt tcacc 25

<210> 239
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 239
 caggaatgta aagctttaca gagggcgcc atcctcggtc cccacc 46

<210> 240
 <211> 2567
 <212> DNA
 <213> Homo sapiens

<400> 240
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 gccgcagttc tcgagctcca gctgcattcc ctccgcgtcc gcccacgct 100
 tctcccgtc cgggccccgc aatggcccag gcagtgtggt cgcgcctcgg 150
 ccgcatcctc tggcttgccg gcctcctgcc ctgggccccg gcaggggtgg 200
 ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgccaccacg 250
 ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300
 cctggccctg cccgctgacg cccacctota ccgcttcac tggtatccaca 350
 ccccgtggt gcttactggc aagatggaga aggtctcag ctccaccatc 400
 cgtgtggtcg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
 tgccgctgac tgctggatgt gccagcctgt ggccaggggc tttgtggtcc 500
 tccccatcac agagtctctc gtgggggacc ttgttgtcac ccagaacact 550

tccctaccct ggcccagctc ctatctcact aagaccgtcc tgaaagtctc 600
 cttcctcctc cagcaccoga gcaacttcct caagaccgcc ttgtttctct 650
 acagctggga cttcggggac gggaccocaga tggtgactga agactccgtg 700
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 ggtggcggag tgggaagagg tggagccgga tgccacgagg gctgtgaagc 800
 agaagaccgg ggactttctc gcctcgtctga agctgcagga aacccttcga 850
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 gtggccagca cagcgtacaa cctgaccac accttcagg accctgggga 1050
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 accacaagat ccaggtgtgg ccctccagaa tccagccggc tgtctttgct 1150
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 ccctcccccac cccatctcag tgttaactga ctgctgactt ggagtttcca 1450
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 ttggcctgga tcatccatcc atctgtacag ttcagccact gccacaagcc 1550
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 ctctaggtg ggctggctg cccactgccc attcctctca tattggcaca 1750
 tctgctgtcc attgggggtt ctgagtttcc tccccagac agccctacct 1800
 gtgccagaga gctagaaaga aggtcataaa ggggttaaaa tccataacta 1850
 aaggtgttac acatagatgg gcacactcac agagagaagt gtgcatgtac 1900
 acacaccaca cacacacaca cacacacaca cacagaaata taaacacatg 1950
 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtcgggt 2000
 gctgggatgc accctgcact agagctgaaa ggaaatttga cctccaagca 2050
 gccctgacag gttctggggc cgggcccctcc ctttgtgctt tgtctctgca 2100
 gttcttgccg cctttataag gccatcctag tccctgctgg ctggcagggg 2150

cctggatggg gggcaggact aatactgagt gattgcagag tgctttataa 2200
 atatcacctt attttatcga aacccatctg tgaaactttc actgaggaaa 2250
 aggccttgca gcggtagaag aggttgagtc aaggccgggc gcggtggctc 2300
 acgcctgtaa tcccagcact ttgggaggcc gaggcgggtg gatcacgaga 2350
 tcaggagatc gagaccaccc tggctaacac ggtgaaaccc cgtctctact 2400
 aaaaaaatac aaaaagttag ccgggcgtgg tgggtgggtgc ctgtagtccc 2450
 agctactcgg gaggctgagg caggagaatg gtgcgaaccc gggaggcgga 2500
 gcttgcatg agcccagatg gcgccactgc actccagcct gagtgcacaga 2550
 gcgagactct gtctcca 2567

<210> 241

<211> 423

<212> PRT

<213> Homo sapiens

<400> 241

Met	Ala	Gln	Ala	Val	Trp	Ser	Arg	Leu	Gly	Arg	Ile	Leu	Trp	Leu	1	5	10	15
Ala	Cys	Leu	Leu	Pro	Trp	Ala	Pro	Ala	Gly	Val	Ala	Ala	Gly	Leu	20	25	30	
Tyr	Glu	Leu	Asn	Leu	Thr	Thr	Asp	Ser	Pro	Ala	Thr	Thr	Gly	Ala	35	40	45	
Val	Val	Thr	Ile	Ser	Ala	Ser	Leu	Val	Ala	Lys	Asp	Asn	Gly	Ser	50	55	60	
Leu	Ala	Leu	Pro	Ala	Asp	Ala	His	Leu	Tyr	Arg	Phe	His	Trp	Ile	65	70	75	
His	Thr	Pro	Leu	Val	Leu	Thr	Gly	Lys	Met	Glu	Lys	Gly	Leu	Ser	80	85	90	
Ser	Thr	Ile	Arg	Val	Val	Gly	His	Val	Pro	Gly	Glu	Phe	Pro	Val	95	100	105	
Ser	Val	Trp	Val	Thr	Ala	Ala	Asp	Cys	Trp	Met	Cys	Gln	Pro	Val	110	115	120	
Ala	Arg	Gly	Phe	Val	Val	Leu	Pro	Ile	Thr	Glu	Phe	Leu	Val	Gly	125	130	135	
Asp	Leu	Val	Val	Thr	Gln	Asn	Thr	Ser	Leu	Pro	Trp	Pro	Ser	Ser	140	145	150	
Tyr	Leu	Thr	Lys	Thr	Val	Leu	Lys	Val	Ser	Phe	Leu	Leu	His	Asp	155	160	165	
Pro	Ser	Asn	Phe	Leu	Lys	Thr	Ala	Leu	Phe	Leu	Tyr	Ser	Trp	Asp	170	175	180	
Phe	Gly	Asp	Gly	Thr	Gln	Met	Val	Thr	Glu	Asp	Ser	Val	Val	Tyr	185	190	195	

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val	
				200					205					210	
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val	
				215					220					225	
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu	
				230					235					240	
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr	
				245					250					255	
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro	
				260					265					270	
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu	
				275					280					285	
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn	
				290					295					300	
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile	
				305					310					315	
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile	
				320					325					330	
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro	
				335					340					345	
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met	
				350					355					360	
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro	
				365					370					375	
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly	
				380					385					390	
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg	
				395					400					405	
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr	
				410					415					420	

Tyr Thr Val

<210> 242
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 242
 catttcctta ccctggaccc agctcc 26

<210> 243
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggca 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgacccg agcaacttcc tcaagacoga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50
gctcccagat ctgggccgct tgcctcctgc tctcctcct cctcgccagc 100
ctgaccagtg gctctgtttt cccacaacag acgggacaac ttgcagagct 150
gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gaggcgagac acccacttcc ccatctgcat tttctgctgc 250
ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300
acctgccctg ccccgctccc ctcccttctc tatttattcc tgctgcccc 350
gaacataggt cttggaataa aatggctggt tcttttgttt tccccaaaaa 400
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr
80

<210> 247
<211> 2359
<212> DNA
<213> Homo sapiens

<400> 247
ctgtcaggaa ggaccatctg aaggctgcaa tttgttctta gggaggcagg 50
tgctggcctg gcctggatct tccaccatgt tcctgttgct gccttttgat 100
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcaccct 150
ccttctcggt ttcatcatag tgccagccat ttttgagtc tcctttggta 200
tccgcaaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
ttgagaatgg agcgaggagc caaggagaag aaccaccagc tttacaagcc 300
ctacaccaac ggaatcattg caaaggatcc cacttcacta gaagaagaga 350
tcaaagagat tcgtcgaagt ggtagtagta aggcctctgga caaactcca 400
gagttcgagc tctctgacat tttctacttt tgccggaaag gaatggagac 450
cattatggat gatgaggatg caaagagatt ctgagcagaa gaactggagt 500
cctggaacct gctgagcaga accaattata acttcagta catcagcctt 550
cggctcacgg tcctgtgggg gttaggagtg ctgattcggg actgctttct 600
gctgccgctc aggatagcac tggctttcac agggattagc cttctggtgg 650
tgggcacaac tgtggtggga tacttgccaa atgggagggt taaggaattc 700
atgagtaaac atgttcactt aatgtgttac cggatctgag tgcgagcgt 750
gacagccatc atcacctacc atgacaggga aaacagacca agaaatggtg 800
gcatctgtgt ggccaatcat acctcaccga tcgatgtgat catcttggcc 850
agcgatggct attatgccat ggtgggtcaa gtgcacgggg gactcatggg 900
tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggtttgagc 950
gctcggaagt gaaggatcgc cacctggtgg ctaagagact gactgaacat 1000
gtgcaagata aaagcaagct gcctatcctc atcttcccag aaggaacctg 1050
catcaataat acatcggtga tgatgttcaa aaagggaagt tttgaaattg 1100
gagccacagt ttaccctggt gctatcaagt atgaccctca atttggogat 1150
gccttctgga acagcagcaa atacgggatg gtgacgtacc tgctgcgaat 1200
gatgaccagc tgggccattg tctgcagcgt gtggtacctg cctcccatga 1250
ctagagaggc agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300
gccattgcca ggcagggagg acttgtggac ctgctgtggg atgggggcct 1350

gaagagggag aaggtgaagg acacgttcaa ggaggagcag cagaagctgt 1400
acagcaagat gatcgtgggg aaccacaagg acaggagccg ctcttgagcc 1450
tgcctccagc tggctggggc caccgtgcgg ggtgccaacg ggctcagagc 1500
tggagttgcc gccgccgccc cactgctgt gtcctttcca gactccaggg 1550
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gctgctgggt gttgcgaccc aggacgagat gccttgtttc ttttacaata 1700
agtcgttga ggaatgccat taaagtgaac tccccacctt tgcacgctgt 1750
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cgggtacaaga gtctgttatg caagcccgtg tgccagggat gtgctggggg 1850
cggccacccg ctctccagga aaggcacagc tgaggcactg tggctggcctt 1900
cggcctcaac atcgccccca gccttgagc totgcagaca tgataggaag 1950
gaaactgtca tctgcagggg ctttcagcaa aatgaagggt tagattttta 2000
tgctgctgct gatgggggta ctaaaggag gggaagaggc cagggtgggc 2050
gctgactggg ccatggggag aacgtgtgtt cgtactccag gctaaccctg 2100
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tctgtaatat gagtcggggg gaatggtggt gattcctacc tcacagggct 2200
gttggtgggga ttaaagtgtc gcgggtgagt gaaggacaca tcacgttcag 2250
tgtttcaagt acaggccac aaaacggggc acggcaggcc tgagctcaga 2300
gctgctgcac tgggctttgg atttgttctt gtgagtaaataaaaactggct 2350
ggtgaatga 2359

<210> 248
<211> 456
<212> PRT
<213> Homo sapiens

<400> 248
Met Phe Leu Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu
1 5 10 15
Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile
20 25 30
Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu
35 40 45
Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg
50 55 60
Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro
65 70 75

Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu	80	85	90
Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp	95	100	105
Asn	Thr	Pro	Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg	110	115	120
Lys	Gly	Met	Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe	125	130	135
Ser	Ala	Glu	Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn	140	145	150
Tyr	Asn	Phe	Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly	155	160	165
Leu	Gly	Val	Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile	170	175	180
Ala	Leu	Ala	Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr	185	190	195
Val	Val	Gly	Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser	200	205	210
Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu	215	220	225
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn	230	235	240
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile	245	250	255
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His	260	265	270
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys	275	280	285
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu	290	295	300
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu	305	310	315
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser	320	325	330
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val	335	340	345
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe	350	355	360
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met	365	370	375
Met	Thr	Ser	Trp	Ala	Ile	Val	Cys	Ser	Val	Trp	Tyr	Leu	Pro	Pro	380	385	390

Met	Thr	Arg	Glu	Ala	Asp	Glu	Asp	Ala	Val	Gln	Phe	Ala	Asn	Arg
				395					400					405
Val	Lys	Ser	Ala	Ile	Ala	Arg	Gln	Gly	Gly	Leu	Val	Asp	Leu	Leu
				410					415					420
Trp	Asp	Gly	Gly	Leu	Lys	Arg	Glu	Lys	Val	Lys	Asp	Thr	Phe	Lys
				425					430					435
Glu	Glu	Gln	Gln	Lys	Leu	Tyr	Ser	Lys	Met	Ile	Val	Gly	Asn	His
				440					445					450
Lys	Asp	Arg	Ser	Arg	Ser									
				455										

<210> 249
 <211> 1103
 <212> DNA
 <213> Homo sapiens

<400> 249
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 ccctggccct cacgtctcct ccagggatgg cgctggcggc tttgatgac 100
 gccctcggca gcctcggcct ccacacctgg caggcccagg ctgttcccac 150
 catcctgccc ctgggcctgg ctccagacac ctttgacgat acctatgtgg 200
 gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250
 atggcccacc atgccctgct gcgggaatcc tgggaggcag ccaggagac 300
 ctgggaggac aagcgtcgag ggcttacott gccccctggc ttcaaagccc 350
 agaatggaat agccattatg gtctacacca actcatcgaa caccttgtac 400
 tgggagttga atcaggccgt gcggacgggc ggaggctccc gggagctcta 450
 catgaggcac tttcccttca aggccctgca tttctacctg atcggggccc 500
 tgcagctgct gcgaggcagt gggggctgca gcaggggacc tggggagggtg 550
 gtgttccgag gtgtgggcag ccttcgcttt gaacccaaga ggctggggga 600
 ctctgtccgc ttggggcagt ttgcctccag ctccctggat aaggcagtgg 650
 cccacagatt tggggagaag aggcggggct gtgtgtctgc gccaggggtg 700
 cagctagggt cacaatctga gggggcctcc tctctgcccc cctggaagac 750
 tctgctcttg gccctggag agttccagct ctgagggtt gggccctgaa 800
 agtccaacat ctgccactta ggagccctgg gaacgggtga cttcatatg 850
 acgaagaggc acctccagca gccttgagaa gcaagaacat ggttccggac 900
 ccagccctag cagccttctc cccaaccagg atgttggcct ggggaggcca 950
 cagcagggtg gagggaaact tgctatgtga tggggacttc ctgggacaag 1000
 caaggaaagt actgaggcag ccacttgatt gaacggtgtt gcaatgtgga 1050

gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100

gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

Met	Ala	Leu	Ala	Ala	Leu	Met	Ile	Ala	Leu	Gly	Ser	Leu	Gly	Leu
1				5					10					15

His	Thr	Trp	Gln	Ala	Gln	Ala	Val	Pro	Thr	Ile	Leu	Pro	Leu	Gly
			20						25					30

Leu	Ala	Pro	Asp	Thr	Phe	Asp	Asp	Thr	Tyr	Val	Gly	Cys	Ala	Glu
			35						40					45

Glu	Met	Glu	Glu	Lys	Ala	Ala	Pro	Leu	Leu	Lys	Glu	Glu	Met	Ala
				50					55					60

His	His	Ala	Leu	Leu	Arg	Glu	Ser	Trp	Glu	Ala	Ala	Gln	Glu	Thr
			65						70					75

Trp	Glu	Asp	Lys	Arg	Arg	Gly	Leu	Thr	Leu	Pro	Pro	Gly	Phe	Lys
			80						85					90

Ala	Gln	Asn	Gly	Ile	Ala	Ile	Met	Val	Tyr	Thr	Asn	Ser	Ser	Asn
			95						100					105

Thr	Leu	Tyr	Trp	Glu	Leu	Asn	Gln	Ala	Val	Arg	Thr	Gly	Gly	Gly
			110						115					120

Ser	Arg	Glu	Leu	Tyr	Met	Arg	His	Phe	Pro	Phe	Lys	Ala	Leu	His
			125						130					135

Phe	Tyr	Leu	Ile	Arg	Ala	Leu	Gln	Leu	Leu	Arg	Gly	Ser	Gly	Gly
			140						145					150

Cys	Ser	Arg	Gly	Pro	Gly	Glu	Val	Val	Phe	Arg	Gly	Val	Gly	Ser
			155						160					165

Leu	Arg	Phe	Glu	Pro	Lys	Arg	Leu	Gly	Asp	Ser	Val	Arg	Leu	Gly
			170						175					180

Gln	Phe	Ala	Ser	Ser	Ser	Leu	Asp	Lys	Ala	Val	Ala	His	Arg	Phe
			185						190					195

Gly	Glu	Lys	Arg	Arg	Gly	Cys	Val	Ser	Ala	Pro	Gly	Val	Gln	Leu
			200						205					210

Gly	Ser	Gln	Ser	Glu	Gly	Ala	Ser	Ser	Leu	Pro	Pro	Trp	Lys	Thr
			215						220					225

Leu	Leu	Leu	Ala	Pro	Gly	Glu	Phe	Gln	Leu	Ser	Gly	Val	Gly	Pro
			230						235					240

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 251
ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252
<211> 1076
<212> DNA
<213> Homo sapiens

<400> 252
gtggcttcat ttcagtggct gacttccaga gagcaatatg gctggttccc 50
caacatgcct caccctcatc tatatccttt ggcagctcac agggtcagca 100
gcctctggac ccgtgaaaga gctggtcggg tccgttggtg gggccgtgac 150
tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200
tcaacacaac ccctcttgtc accatacagc cagaaggggg cactatcata 250
gtgacccaaa atcgtaatag ggagagagta gacttcccag atggaggcta 300
ctccctgaag ctgagcaaac tgaagaagaa tgactcaggg atctactatg 350
tggggatata cagctcatca ctccagcagc cctccacca ggagtacgtg 400
ctgcatgtct acgagcacct gtcaaagcct aaagtcacca tgggtctgca 450
gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattggaac 500
atggggaaga ggatgtgatt tatacctgga aggccctggg gcaagcagcc 550
aatgagtccc ataatgggtc catcctcccc atctcctgga gatggggaga 600
aagtgatatg accttcatct gcgttgccag gaaccctgtc agcagaaact 650
tctcaagccc catccttgcc aggaagctct gtgaagggtc tgctgatgac 700
ccagattcct ccattggtcct cctgtgtctc ctggttggtc ccctcctgct 750
cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800
aagaagagta cattgaagag aagaagagag tggacatttg tcgggaaact 850
cctaacatat gccccattc tggagagaac acagagtagc acacaatccc 900
tcacactaat agaacaatcc taaaggaaga tccagcaaata acggtttact 950
ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacg 1000
atgccagaca caccaaggct atttgcctat gagaatgtta tctagacagc 1050
agtgcactcc cctaagtctc tgctca 1076

<210> 253
<211> 335
<212> PRT
<213> Homo sapiens

<400> 253
Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

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aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200
acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250
ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300
tctatgggtg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450
gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500
tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550
tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600
gcctccagtg ttgagtggac acttctcacc aggaactccac catcatccct 650
tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
acctcatcaa gaatcaaaga cttcttttaa tttctctttg atacaccctt 800
gacaattttt catgaaatta ttctctttcc tgttcaataa atgattaccc 850
ttgcacttaa 860

<210> 256
<211> 180
<212> PRT
<213> Homo sapiens

<400> 256
Met Lys Met Leu Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys
1 5 10 15
Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val
20 25 30
Glu Lys Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp
35 40 45
Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu
50 55 60
Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His
65 70 75
Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp
80 85 90
Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe
95 100 105
Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met
110 115 120

Ala	His	Leu	Ile	Asn	Glu	Lys	Asp	Gly	Glu	Thr	Phe	Gln	Leu	Met
				125					130					135
Gly	Leu	Tyr	Gly	Arg	Glu	Pro	Asp	Leu	Ser	Ser	Asp	Ile	Lys	Glu
				140					145					150
Arg	Phe	Ala	Gln	Leu	Cys	Glu	Glu	His	Gly	Ile	Leu	Arg	Glu	Asn
				155					160					165
Ile	Ile	Asp	Leu	Ser	Asn	Ala	Asn	Arg	Cys	Leu	Gln	Ala	Arg	Glu
				170					175					180

<210> 257
 <211> 766
 <212> DNA
 <213> Homo sapiens

<400> 257
 ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50
 gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100
 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaatth 150
 tctcaaaacc ccatctcttg ctttgagtgg tggttcccag gaattatagg 200
 agcaggctctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250
 aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300
 agtgtgatca cagtcattgg tgctctgtat tgcattgctga tatccatcca 350
 ggctctctta aaaggtcctc tcatgtgtaa ttctccaagc aacagtaatg 400
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
 ttcaacttgc agtgggtttt caatgactct tgtgcaacct ctactgggtt 500
 caataaacc accagtaacg acaccatggc gagggtgctg agagcatcta 550
 gtttccactt cgattctgaa gaaaacaaac atagggttat ccacttctca 600
 gtatttttag gtctattgct tgttggaatt ctggagggtcc tgtttgggct 650
 cagtcagata gtcacgggtt tccttggtg tctgtgtgga gtctctaagc 700
 gaagaagtca aattgtgtag tttaatggga ataaaatgta agtatcagta 750
 gtttgaaaaa aaaaaa 766

<210> 258
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 258
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
 1 5 10 15
 Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
 20 25 30
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

tcaacacggtt gctttaataa atcaacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys
1 5 10 15

Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu
20 25 30

Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln
35 40 45

Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu
50 55 60

Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu
65 70 75

Ser Leu Lys Lys Ser Trp Trp Lys
80

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccgttctc tgcgctgcc a gctcaggtga gccctcgcca aggtgacctc 50

gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100

ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150

cgccccagtg cctctcccc tgcagccctg cccctcgaac tgtgacatgg 200

agagagtgc cctggccctt ctctactgg caggcctgac tgccttgga 250

gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300

aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350

ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400

cagcacagtc ctgtacctga gaaggccatc ccactcatca ctccaggctc 450

tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500

taacactggc cccagcacc tcctcccctg ggaggcctta tcctcaagga 550

aggacttctc tccaagggca ggctgttagg cccctttctg atcaggaggc 600

ttctttatga attaaactcg cccaccacc ccctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met	Glu	Arg	Val	Thr	Leu	Ala	Leu	Leu	Leu	Ala	Gly	Leu	Thr
1				5				10				15	
Ala	Leu	Glu	Ala	Asn	Asp	Pro	Phe	Ala	Asn	Lys	Asp	Asp	Pro
				20				25				30	
Tyr	Tyr	Asp	Trp	Lys	Asn	Leu	Gln	Leu	Ser	Gly	Leu	Ile	Cys
				35				40				45	
Gly	Leu	Leu	Ala	Ile	Ala	Gly	Ile	Ala	Ala	Val	Leu	Ser	Gly
				50				55				60	
Cys	Lys	Tyr	Lys	Ser	Ser	Gln	Lys	Gln	His	Ser	Pro	Val	Pro
				65				70				75	
Lys	Ala	Ile	Pro	Leu	Ile	Thr	Pro	Gly	Ser	Ala	Thr	Thr	Cys
				80				85					

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgctg 50
ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100
actcctgctg ctggtttgtg gctcctggct actcgccgc atcctggctt 150
ggacctatgc cttctataac aactgccgcc ggctccagtg tttccacag 200
ccccaaaac ggaactggtt ttggggtcac ctgggcctga tcaactctac 250
agaggagggc ttgaaggact cgaccagat gtcggccacc tattccag 300
gctttacggt atggctgggt cccatcatcc ccttcacgt tttatgccac 350
cctgacacca tccggtctat caccaatgcc tcagctgcca ttgcaccaa 400
ggataatctc ttcacaggt tcctgaagcc ctggctggga gaagggatac 450
tgctgagtgg cggtgacaag tggagccgcc accgtcggat gctgacgcc 500
gccttccatt tcaacatcct gaagtcctat ataacgatct tcaacaagag 550
tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600
gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650
cagaaatgca tcttcagctt tgacagccat tgcaggaga ggcccagtga 700
atatattgcc accatcttgg agctcagtgc cctttagtag aaaagaagcc 750
agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800
cggcgcttcc acagggcctg ccgcctggtg catgacttca cagacgctgt 850
catccgggag cggcgtcgca ccctcccccac tcagggtatt gatgattttt 900
tcaaagacaa agccaagtcc aagacttttg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050
tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100
tgccgacagg aggtgcaaga gcttctgaag gaccgcatc ctaaagagat 1150
tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200
agagcctgag gttacatccc ccagctccct tcctctcccg atgctgcacc 1250
caggacattg ttctcccaga tggccgagtc atcccaaag gcattacctg 1300
cctcatcgat attatagggg tccatcacia cccaactgtg tggccggatc 1350
ctgaggtcta cgacccttc cgctttgacc cagagaacag caaggggagg 1400
tcacctctgg cttttattcc tttctccgca gggcccagga actgcatcgg 1450
gcaggcgttc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500
tgcaactccg gttcctgcca gaccacactg agccccgcag gaagctggaa 1550
ttgatcatgc gcgccgaggg cgggctttgg ctgcgggtgg agcccctgaa 1600
tgtaggcttg cagtgacttt ctgaccatc cacctgtttt tttgcagatt 1650
gtcatgaata aaacggtgct gtcaaa 1676

<210> 264
<211> 524
<212> PRT
<213> Homo sapiens

<400> 264
Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala
1 5 10 15
Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu
20 25 30
Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys
35 40 45
Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe
50 55 60
Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys
65 70 75
Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val
80 85 90
Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp
95 100 105
Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys
110 115 120
Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Gly
125 130 135

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met	
				140					145					150	
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr	
				155					160					165	
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His	
				170					175					180	
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile	
				185					190					195	
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe	
				200					205					210	
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile	
				215					220					225	
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu	
				230					235					240	
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg	
				245					250					255	
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val	
				260					265					270	
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp	
				275					280					285	
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp	
				290					295					300	
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp	
				305					310					315	
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His	
				320					325					330	
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala	
				335					340					345	
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu	
				350					355					360	
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu	
				365					370					375	
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg	
				380					385					390	
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp	
				395					400					405	
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys	
				410					415					420	
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro	
				425					430					435	
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser	
				440					445					450	

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro
455 460 465

Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val
470 475 480

Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His
485 490 495

Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly
500 505 510

Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln
515 520

<210> 265
<211> 584
<212> DNA
<213> Homo sapiens

<400> 265
caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
ctggcctcct gctgtttgct tttcacagga ttcttaaatac ctctcttatac 100
tcttcctctc cttgactcca gggaaatatac ctttcaactc tcagcacctc 150
atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
cagatatgtc cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250
agcagactca agtaccaaca tttttaaccc aagaggaaat ttgagaaagt 300
ttcaggattt ctctggacaa gatacctaaca ttttactgag tcatcttttg 350
gccagaatct ggaaaccata caagaaacgt gagactcctg attgcttctg 400
gaaataactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450
acctatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500
tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550
aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
<211> 124
<212> PRT
<213> Homo sapiens

<400> 266
Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu
1 5 10 15
Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser
20 25 30
Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu
35 40 45
Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu
50 55 60

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269
 <211> 1332
 <212> DNA
 <213> Homo sapiens

<400> 269
 cggccacagc tggcatgctc tgccatgatcg ccacccctgct gtatgtcctc 50
 gtccagtacc tcgtgaaccc cggggtgctc cgcacggacc ccagatgtca 100
 agaatatgaa cacgtggctg ctgttcctcc ccctgttccc ggtgcagggtg 150
 cagaccctga tagtcgtgat catcgggatg ctctgtgctcc tgctggactt 200
 tcttggcttg gtgcacctgg gccagctgct catcttccac atctacctga 250
 gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300
 gctgctcatc ttacacctct acttgagtat gtccctaacc ctgagcccc 350
 cagcctggg gccagagtct ttgtcccccg tgtgcgcatg tgttcagggt 400
 cagcctctcc cagaagtga atcatggaca aaaagggcaa atcacaggaa 450
 gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500
 gccgagacct gcaggagtgg tgccagggtg ttgaagtaac aagtttaaaa 550
 tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600
 aaataaggac aggtggactt ccaaaaacac aagtagaaat tctaacaatg 650
 aaatatatta caggcaggtc acccactaac caaacaactg aagcgagagc 700
 tgtggctctt cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750
 gttgctgaac gacggagggt aaactcccca gccccaagaa aacctgtgtt 800
 ggaagtaaca acaacctccc tgctcctggc accagccggt ttggtcatgg 850
 tgggccagct gcaaagcgtc ttccattctc tgggcagtg tggccccgag 900
 gctgtggcct ctcagggggt ttctgtggac acgggcagca gactgtgtcc 950
 aggccagccc ccaagaatgc cctgtcctg acagcttggc caaccctgg 1000
 tcagggcaga gggagttggg tgggtcaggc tctgggctca cctccatctc 1050

cagagcatcc cctgcctgca gttgtggcaa gaacgccag ctcagaatga 1100
acacacccca ccaagagcct ccttgttcat aaccacaggt taccctacaa 1150
accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200
cgcatatctt acagtcactg ttgtcttgcc tgagggttga atttttttta 1250
atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270
<211> 142
<212> PRT
<213> Homo sapiens

<400> 270
Met Asn Thr Trp Leu Leu Phe Leu Pro Leu Phe Pro Val Gln Val
1 5 10 15
Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu
20 25 30
Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His
35 40 45
Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln
50 55 60
Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr
65 70 75
Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val
80 85 90
Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu
95 100 105
Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met
110 115 120
Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro
125 130 135
Ala Gly Val Val Pro Gly Ala
140

<210> 271
<211> 1484
<212> DNA
<213> Homo sapiens

<400> 271
ggagtgcaga tggcatcctt cggttcttcc agacaagctg caagacgctg 50
accatggcca agatggagct ctggaaggcc ttctctggcc agcggacact 100
cctatctgcc atcctcagca tgctatcact cagcttctcc acaacatccc 150
tgctcagcaa ctactggttt gtgggcacac agaaggtgcc caagcccctg 200
tgcgagaaaag gtctggcagc caagtgcctt gacatgccag tgtccctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300
 ctgggggatga ccggttctcc ttccggagct tccggagtgg catgtggcta 350
 tcctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtttcat 400
 tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450
 ccacgttgca agggccatgt cccccactc tccgatttgg agggaagcgg 500
 ttgatggaga aggttccct cccctccct cccttggggc tttgtggcaa 550
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttcaa 600
 ttcacagct tcctcctgct actaacagac ttgctactca ctgggaaccc 650
 tgctgtggg ctcaaactga ggcctttgc tgctgtttcc tctgtcctgt 700
 caggtctcct ggggatggtg gccacatga tgtattcaca agtcttcaa 750
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800
 tggtgtgggc ttctacatgg cctggtctc cttcacctgc tgcattggct 850
 cggctgtcac caccttcaac acgtacacca ggatggtgct ggagttcaag 900
 tgcaagcata gtaagagctt caaggaaaac ccgaactgcc taccacatca 950
 ccatcagtgt ttccctcggc ggctgtcaag tgcagcccc accgtgggtc 1000
 ctttgaccag ctaccaccag tatcataatc agcccatcca ctctgtctct 1050
 gagggagtcg acttctactc cgagctgcgg aacaaggat ttcaaagagg 1100
 ggccagccag gagctgaaag aagcagttag gtcattctgta gaggaagagc 1150
 agtgtttaga gttaagcggg tttggggagt aggcttgagc cctaccttac 1200
 acgtctgctg attatcaaca tgtgtttaag ccaacatccg tctcttgagc 1250
 atggttttta gaggtacga ataaggctat gaataagggt tatctttaag 1300
 tcctaaggga ttcttgggtg ccaactgctc ttttctctc acagctccat 1350
 cttgtttcac ccacccaca tctcacacat ccagaattcc cttctttact 1400
 gatagtttct gtgccagggt ctgggctaaa ccatggagat aaaaagaaga 1450
 gtaaaatata cttcccgacc ttaaggatct gaaa 1484

<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

Met	Ala	Lys	Met	Glu	Leu	Ser	Lys	Ala	Phe	Ser	Gly	Gln	Arg	Thr
1				5					10					15

Leu	Leu	Ser	Ala	Ile	Leu	Ser	Met	Leu	Ser	Leu	Ser	Phe	Ser	Thr
				20					25					30

Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Trp	Phe	Val	Gly	Thr	Gln	Lys	Val
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	35	40	45
Pro Lys Pro Leu Cys Glu Lys Gly Leu Ala Ala Lys Cys Phe Asp	50	55	60
Met Pro Val Ser Leu Asp Gly Asp Thr Asn Thr Ser Thr Gln Glu	65	70	75
Val Val Gln Tyr Asn Trp Glu Thr Gly Asp Asp Arg Phe Ser Phe	80	85	90
Arg Ser Phe Arg Ser Gly Met Trp Leu Ser Cys Glu Glu Thr Val	95	100	105
Glu Glu Pro Gly Glu Arg Cys Arg Ser Phe Ile Glu Leu Thr Pro	110	115	120
Pro Ala Lys Arg Gly Glu Lys Gly Leu Leu Glu Phe Ala Thr Leu	125	130	135
Gln Gly Pro Cys His Pro Thr Leu Arg Phe Gly Gly Lys Arg Leu	140	145	150
Met Glu Lys Ala Ser Leu Pro Ser Pro Pro Leu Gly Leu Cys Gly	155	160	165
Lys Asn Pro Met Val Ile Pro Gly Asn Ala Asp His Leu His Arg	170	175	180
Thr Ser Ile His Gln Leu Pro Pro Ala Thr Asn Arg Leu Ala Thr	185	190	195
His Trp Glu Pro Cys Leu Trp Ala Gln Thr Glu Arg Leu Cys Cys	200	205	210
Cys Phe Leu Cys Pro Val Arg Ser Pro Gly Asp Gly Gly Pro His	215	220	225
Asp Val Phe Thr Ser Leu Pro Ser Asp Cys Gln Leu Gly Ser Arg	230	235	240
Arg Leu Glu Thr Thr Cys Leu Glu Leu Trp Leu Gly Leu Leu His	245	250	255
Gly Leu Ala Leu Leu His Leu Leu His Gly Val Gly Cys His His	260	265	270
Leu Gln His Val His Gln Asp Gly Ala Gly Val Gln Val Gln Ala	275	280	285

<210> 273
 <211> 1158
 <212> DNA
 <213> Homo sapiens

<400> 273
 aactggaagg aaagaaagaa aggtcagctt tggcccagat gtggttaccc 50
 cttggtctcc tgtctttatg tctttctcct cttcctattc tgtcatctcc 100
 ctcacttaag totcaggcct gtcagcagct cctgtggaca ttgccatccc 150
 ctctggtagc cttcagagca aacaggacaa cctatgttat ggatgtttcc 200

accaaccagg gtagtggcat ggagcacctg aaccatctgt gcttctgtga 250
 tctctatgac agagccactt ctccacctct gaaatgttcc ctgctctgaa 300
 atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350
 cctgccctat tctcctccc aagtctgttc tcttattgtc aacctcagca 400
 caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450
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 agattcagga cattcgcccc tgtgtgccac caaaccagga ctttcccctt 600
 ggcttggcat ccctggctct ctccgtgtac ccagcaagac gtctgttcca 650
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<210> 274
 <211> 86
 <212> PRT
 <213> Homo sapiens

<400> 274
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 20 25 30
 Leu Leu Trp Thr Leu Pro Ser Pro Leu Val Ala Phe Arg Ala Asn
 35 40 45
 Arg Thr Thr Tyr Val Met Asp Val Ser Thr Asn Gln Gly Ser Gly
 50 55 60
 Met Glu His Arg Asn His Leu Cys Phe Cys Asp Leu Tyr Asp Arg
 65 70 75
 Ala Thr Ser Pro Pro Leu Lys Cys Ser Leu Leu
 80 85

<210> 275
<211> 2694
<212> DNA
<213> Homo sapiens

<400> 275
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cttctcactt ttattgtaag catactattt tcacagagac ttgctgaagg 650
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acatttttga gataagggtt ttatttatgt ttattattgt tagagtgagt 1250
tgcaatgtgg gaagaaatga cattgaaatt ccagtttttg aatcctgttt 1300
ctattttataa gtgaaatttg tgatctctta tcaacctttc atgttttacc 1350
ctgttaaaaat ggacatacat ggaaccacta ctgatgaggg acagttgtat 1400
gtttgcatca tatatgccag aaaaccttcc tctgcttcct ctttttgact 1450

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Pro Ile Pro Tyr Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp					
	50		55		60
Ala Met Ser Asn Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr Thr					
	65		70		75
Gly Ile Val Val Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg					
	80		85		90
Ala His Leu Ile Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly					
	95		100		105
Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe					
	110		115		120
Gly Ser Asn Asp Asp Phe Ser Trp Gln Gln Trp					
	125		130		

<210> 277
 <211> 4104
 <212> DNA
 <213> Homo sapiens

<400> 277
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 cacactgcct ggtggagga aggagcccg gcgcctctcg ccgctccccg 150
 cgccgcgcgc cgcacctccc caccgcccgc cgcccgccgc ccgcccgcgc 200
 caaagcatga gtgagcccgc tctctgcagc tgcccggggc gcgaatggca 250
 ggctgtttcc gcggagtaaa aggtggcgcc ggtcagtggc cgtttccaat 300
 gacggacatt aaccagactg tcagatcctg gggagtcgcg agccccgagt 350
 ttggagtttt ttccccccac aacgtcacag tccgaactgc agagggaaag 400
 gaaggcggca ggaaggcgaa gtcgggctc cggcacgtag ttgggaaact 450
 tgcgggtcct agaagtcgcc tccccgcctt gccggccgcc cttgcagccc 500
 cgagccgagc agcaaagtga gacattgtgc gcctgccaga tccgcccggc 550
 gcggaccggg gctgcctcgg aaacacagag gggctctctc tcgccctgca 600
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 ctggaaaagg atttctgacc gagcgcttcc aatggacatt ctccagtctc 700
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aactgcgccg agttaaggaa ctcacgtctga gttccaacca gatcacccaa 1100
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caatcagctc aagagtctgg cgcgcaactc tttcgccggc ttgtttaagc 1350
tcaccgagct gcacctcgag cacaacgact tggtaaggt gaacttcgcc 1400
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cgcgagcggc ggggagggc agcacgacgg cacattcgag cctgccaccg 1950
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gaaccacatt gagggagccc tggatgatc caacgagtat ggctcgtgta 2250
cctgccacca gcagcccg agggaatgc aggtgtgatt gtcccagtgg 2300
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aaccttcagg acagtctatc ttaaatttca tatgagaact ccttcctccc 2550

[illegible]

Met 1	Asp	Phe	Leu	Leu 5	Leu	Gly	Leu	Cys	Leu 10	Tyr	Trp	Leu	Leu	Arg 15
Arg	Pro	Ser	Gly	Val 20	Val	Leu	Cys	Leu	Leu 25	Gly	Ala	Cys	Phe	Gln 30
Met	Leu	Pro	Ala	Ala 35	Pro	Ser	Gly	Cys	Pro 40	Gln	Leu	Cys	Arg	Cys 45
Glu	Gly	Arg	Leu	Leu 50	Tyr	Cys	Glu	Ala	Leu 55	Asn	Leu	Thr	Glu	Ala 60
Pro	His	Asn	Leu	Ser 65	Gly	Leu	Leu	Gly	Leu 70	Ser	Leu	Arg	Tyr	Asn 75
Ser	Leu	Ser	Glu	Leu 80	Arg	Ala	Gly	Gln	Phe 85	Thr	Gly	Leu	Met	Gln 90
Leu	Thr	Trp	Leu	Tyr 95	Leu	Asp	His	Asn	His 100	Ile	Cys	Ser	Val	Gln 105
Gly	Asp	Ala	Phe	Gln 110	Lys	Leu	Arg	Arg	Val 115	Lys	Glu	Leu	Thr	Leu 120
Ser	Ser	Asn	Gln	Ile 125	Thr	Gln	Leu	Pro	Asn 130	Thr	Thr	Phe	Arg	Pro 135
Met	Pro	Asn	Leu	Arg 140	Ser	Val	Asp	Leu	Ser 145	Tyr	Asn	Lys	Leu	Gln 150
Ala	Leu	Ala	Pro	Asp 155	Leu	Phe	His	Gly	Leu 160	Arg	Lys	Leu	Thr	Thr 165
Leu	His	Met	Arg	Ala 170	Asn	Ala	Ile	Gln	Phe 175	Val	Pro	Val	Arg	Ile 180
Phe	Gln	Asp	Cys	Arg 185	Ser	Leu	Lys	Phe	Leu 190	Asp	Ile	Gly	Tyr	Asn 195
Gln	Leu	Lys	Ser	Leu 200	Ala	Arg	Asn	Ser	Phe 205	Ala	Gly	Leu	Phe	Lys 210
Leu	Thr	Glu	Leu	His 215	Leu	Glu	His	Asn	Asp 220	Leu	Val	Lys	Val	Asn 225
Phe	Ala	His	Phe	Pro 230	Arg	Leu	Ile	Ser	Leu 235	His	Ser	Leu	Cys	Leu 240
Arg	Arg	Asn	Lys	Val 245	Ala	Ile	Val	Val	Ser 250	Ser	Leu	Asp	Trp	Val 255
Trp	Asn	Leu	Glu	Lys 260	Met	Asp	Leu	Ser	Gly 265	Asn	Glu	Ile	Glu	Tyr 270
Met	Glu	Pro	His	Val 275	Phe	Glu	Thr	Val	Pro 280	His	Leu	Gln	Ser	Leu 285

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu	290	295	300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu	305	310	315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser	320	325	330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro	335	340	345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe	350	355	360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu	365	370	375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser	380	385	390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr	395	400	405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu	410	415	420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu	425	430	435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp	440	445	450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val	455	460	465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met	470	475	480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn	485	490	495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys	500	505	510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val				515	520	

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

tccgtgcagg gggacgcctt tcagaaaactg cgccgagtta aggaac 46

<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280
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 ccggcggcgc cgttgagttc ccggcggaca agatgggtgc agtcctgggtg 200
 caagaaggtc acgccgtctc agacatgctc ctgccgctgg atggggaact 250
 cgtcctgggt tcaggagccg gattcggcgt ctgagacgtg ggctcgcacc 300
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 ggccgggccc gctgagcgtg ggccccgagg actgcgcgga cccgtcgggc 650
 tgcgtctgct gcaacgcgga ggcgcagccg tggatctgct cggccctgct 700
 ccagcccct 709

<210> 281
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 281
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 20 25 30
 Asp Val Ala Ala Asn Trp Ser Gln Asn Arg Thr Pro Cys Ala Gly
 35 40 45
 Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val
 50 55 60
 Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly
 65 70 75
 Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val
 80 85 90
 Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg
 95 100 105
 Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser
 110 115 120
 Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val
 125 130 135

Pro	Cys	Arg	His	Asp	Asp	Val	Phe	Phe	Pro	Pro	Ser	Ala	Ser	Phe
				140					145					150
Arg	Val	Gly	Leu	Gly	Pro	Gly	Ala	Ser	Pro	Val	Arg	Val	Arg	Ser
				155					160					165
Ile	Ser	Ala	Leu	Gly	Arg	Thr	Phe	Thr	Arg	Asp	Glu	Asp	Leu	Ala
				170					175					180
Val	Phe	Leu	Ala	Ser	Arg	Ala	Gly	Arg	Leu	Arg	Phe	His	Gly	Pro
				185					190					195
Gly	Ala	Leu	Ser	Val	Gly	Pro	Glu	Asp	Cys	Ala	Asp	Pro	Ser	Gly
				200					205					210
Cys	Val	Cys	Gly	Asn	Ala	Glu	Ala	Gln	Pro	Trp	Ile	Cys	Ala	Ala
				215					220					225
Leu	Leu	Gln	Pro											

<210> 282
 <211> 644
 <212> DNA
 <213> Homo sapiens

<400> 282
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 tgtgttttgc acttaccttg tgttctgcct tttggtggca taacaaggga 150
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 tacagacatg tgccttttat cttgcagcaa tgtgttgctt gtgattcgaa 400
 catttgaggg ttacttttgg aagcaacaat acattctoga acctgaatgt 450
 cagtagcaca ggatgagaag tgggttctgt atcttgtgga gtggaatctt 500
 cctcatgtac ctgtttcctc tctggatgtt gtccactga attcccatga 550
 atacaaacct attcagcaac agcaaaaaaa aaaaaaaaaa aaaaaaaaaa 600
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
 <211> 77
 <212> PRT
 <213> Homo sapiens

<400> 283
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 Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

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<210> 285

<211> 477
 <212> PRT
 <213> Homo sapiens

<400> 285

Met	Thr	Ser	Lys	Phe	Ile	Leu	Val	Ser	Phe	Ile	Leu	Ala	Ala	Leu	
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Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val	
				20					25					30	
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys	
				35					40					45	
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His	
				50					55					60	
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn	
				65					70					75	
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile	
				80					85					90	
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser	
				95					100					105	
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala	
				110					115					120	
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly	
				125					130					135	
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe	
				140					145					150	
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp	
				155					160					165	
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile	
				170					175					180	
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His	
				185					190					195	
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp	
				200					205					210	
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala	
				215					220					225	
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly	
				230					235					240	
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr	
				245					250					255	
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala	
				260					265					270	
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala	
				275					280					285	
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp	

290	295	300
Val Pro Glu Arg Trp His Tyr Lys Tyr	Asn Ser Arg Ile Gln Pro	
305	310	315
Ile Ile Ala Val Ala Asp Glu Gly Trp	His Ile Leu Gln Asn Lys	
320	325	330
Ser Asp Asp Phe Leu Leu Gly Asn His	Gly Tyr Asp Asn Ala Leu	
335	340	345
Ala Asp Met His Pro Ile Phe Leu Ala	His Gly Pro Ala Phe Arg	
350	355	360
Lys Asn Phe Ser Lys Glu Ala Met Asn	Ser Thr Asp Leu Tyr Pro	
365	370	375
Leu Leu Cys His Leu Leu Asn Ile Thr	Ala Met Pro His Asn Gly	
380	385	390
Ser Phe Trp Asn Val Gln Asp Leu Leu	Asn Ser Ala Met Pro Arg	
395	400	405
Val Val Pro Tyr Thr Gln Ser Thr Ile	Leu Leu Pro Gly Ser Val	
410	415	420
Lys Pro Ala Glu Tyr Asp Gln Glu Gly	Ser Tyr Pro Tyr Phe Ile	
425	430	435
Gly Val Ser Leu Gly Ser Ile Ile Val	Ile Val Phe Phe Val Ile	
440	445	450
Phe Ile Lys His Leu Ile His Ser Gln	Ile Pro Ala Leu Gln Asp	
455	460	465
Met His Ala Glu Ile Ala Gln Pro Leu	Leu Gln Ala	
470	475	

<210> 286
 <211> 1337
 <212> DNA
 <213> Homo sapiens

<400> 286
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 tcacacagcc aaaggaggca gagccagaac tcacaaccag atccagaggc 200
 aacagggaca tggccacctg ggacgaaaag gcagtcaccc gcagggccaa 250
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 tgggagacga ctaccatgcc tggaacatca actacaagaa atgggagaat 350
 gaagaggagg aggaggagga ggagcagcca ccacccacac cagtctcagg 400
 cgaggaaggc agagctgcag cccctgacgt tgcccctgcc cctggccccg 450
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taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1337

<210> 287
<211> 255
<212> PRT
<213> Homo sapiens

<400> 287
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20 25 30
Val Gly Asp Asp Tyr His Ala Trp Asn Ile Asn Tyr Lys Lys Trp
35 40 45
Glu Asn Glu Glu Glu Glu Glu Glu Glu Gln Pro Pro Pro Thr
50 55 60
Pro Val Ser Gly Glu Glu Gly Arg Ala Ala Ala Pro Asp Val Ala
65 70 75
Pro Ala Pro Gly Pro Ala Pro Arg Ala Pro Leu Asp Phe Arg Gly
80 85 90
Met Leu Arg Lys Leu Phe Ser Ser His Arg Phe Gln Val Ile Ile
95 100 105
Ile Cys Leu Val Val Leu Asp Ala Leu Leu Val Leu Ala Glu Leu
110 115 120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala	
				125					130					135	
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe	
				140					145					150	
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser	
				155					160					165	
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val	
				170					175					180	
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe	
				185					190					195	
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala	
				200					205					210	
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu	
				215					220					225	
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala	
				230					235					240	
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp	
				245					250					255	

<210> 288
 <211> 3334
 <212> DNA
 <213> Homo sapiens

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 cccagaccga gttccagtac tttgagtcga aggggctccc tgccgagctg 150
 aagtccattt tcaagctcag tgtcttcac cctcccagg aattctccac 200
 ctaccgccag tggaagcaga aaattgtaca agctggagat aaggaccttg 250
 atgggcagct agactttgaa gaatttgtcc attatctcca agatcatgag 300
 aagaagctga ggctggtggt taagattttg gacaaaaaga atgatggacg 350
 cattgacgcg caggagatca tgcagtcctt gcgggacttg ggagtcaaga 400
 tatctgaaca gcaggcagaa aaaattctca agagcatgga taaaaacggc 450
 acgatgacca tcgactggaa cgagtggaga gactaccacc tcctccaccc 500
 cgtggaaaac atccccgaga tcctcctcta ctggaagcat tccacgatct 550
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tggggaggga aggaaaagg gttggaggcc ttaattatgg actgttggga 2350

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<210> 289
 <211> 469
 <212> PRT
 <213> Homo sapiens

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<400> 289
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Thr Glu Phe Gln Tyr Phe Glu Ser Lys Gly Leu Pro Ala Glu Leu
      20             25             30

Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe
      35             40             45

Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp
      50             55             60

Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr
      65             70             75

Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu
      80             85             90

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Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln
			95						100					105
Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu
			110						115					120
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp
			125						130					135
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn
			140						145					150
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp
			155						160					165
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu
			170						175					180
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly
			185						190					195
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu
			200						205					210
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly
			215						220					225
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg
			230						235					240
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro
			245						250					255
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu
			260						265					270
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val
			275						280					285
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro
			290						295					300
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln
			305						310					315
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu
			320						325					330
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly
			335						340					345
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu
			350						355					360
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro
			365						370					375
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys
			380						385					390
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met
			395						400					405

Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser
				410					415					420
Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu
				425					430					435
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val
				440					445					450
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly
				455					460					465

Val Gln Ser Arg

<210> 290
 <211> 1658
 <212> DNA
 <213> Homo sapiens

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 atttcaggga gacactccat cacagtcact actgtcgcct cagctgggaa 200
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250
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 catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatgtt 350
 cagaggccgg acagcagtgt ttgctgatca agtgatagtt ggcaatgcct 400
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<210> 293
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 293
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 20 25 30
 Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu
 35 40 45
 Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro
 50 55 60
 Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu
 65 70 75
 Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu
 80 85 90
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp
 95 100 105
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln
 110 115 120
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro
 125 130 135
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro
 140 145 150

Phe	Pro	Leu	Gln	Leu	Phe	Cys	Phe	Leu	Val	Ala	Ile	Arg	Val	Pro
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Phe	Pro	Trp	Thr	Val	Trp	Arg	Lys	Thr	Glu	Ala	Gly	Val	Trp	Asp
				170					175					180

<210> 294
 <211> 1164
 <212> DNA
 <213> Homo sapiens

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 aaaaaaaaaa aaaa 1164

<210> 295
 <211> 237
 <212> PRT

<213> Homo sapiens

<400> 295

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35 40 45
Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro
50 55 60
Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser
65 70 75
Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu
80 85 90
Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys
95 100 105
Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser
110 115 120
Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser
125 130 135
Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val
140 145 150
Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu
155 160 165
Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe
170 175 180
Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys
185 190 195
Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro
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Thr Thr Ser His Asn Val Gly Ser Lys Ala Ser Leu Tyr Leu Leu
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<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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Arg Leu Ala Gly	Pro 80	Ala Ala Ala Glu	Leu 85	Leu Ala Ala Thr	Val 90
Ser Thr Gly Phe	Ser 95	Arg Ser Ser Ala	Ile 100	Asn Glu Glu Asp	Gly 105
Ser Ser Glu Glu	Gly 110	Val Val Ile Asn	Ala 115	Gly Lys Asp Ser	Thr 120
Ser Arg Glu Leu	Pro 125	Ser Ala Thr Pro	Asn 130	Thr Ala Gly Ser	Ser 135
Ser Thr Arg Phe	Ile 140	Ala Asn Ser Gln	Glu 145	Pro Glu Ile Arg	Leu 150
Thr Ser Ser Leu	Pro 155	Arg Ser Pro Gly	Arg 160	Ser Thr Glu Asp	Leu 165
Pro Gly Ser Gln	Ala 170	Thr Leu Ser Gln	Trp 175	Ser Thr Pro Gly	Ser 180
Thr Pro Ser Arg	Trp 185	Pro Ser Pro Ser	Pro 190	Thr Ala Met Pro	Ser 195
Pro Glu Asp Leu	Arg 200	Leu Val Leu Met	Pro 205	Trp Gly Pro Trp	His 210
Cys His Cys Lys	Ser 215	Gly Thr Met Ser	Arg 220	Ser Arg Ser Gly	Lys 225
Leu His Gly Leu	Ser 230	Gly Arg Leu Arg	Val 235	Gly Ala Leu Ser	Gln 240
Leu Arg Thr Glu	His 245	Lys Pro Cys Thr	Tyr 250	Gln Gln Cys Pro	Cys 255
Asn Arg Leu Arg	Glu 260	Glu Cys Pro Leu	Asp 265	Thr Ser Leu Cys	Thr 270
Asp Thr Asn Cys	Ala 275	Ser Gln Ser Thr	Thr 280	Ser Thr Arg Thr	Thr 285
Thr Thr Pro Phe	Pro 290	Thr Ile His Leu	Arg 295	Ser Ser Pro Ser	Leu 300
Pro Pro Ala Ser	Pro 305	Cys Pro Ala Leu	Ala 310	Phe Trp Lys Arg	Val 315
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Thr Glu Met Gln	Pro 335	Ile Asp Arg Asn	Gln 340	Arg	

<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

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<210> 299

<211> 320

<212> PRT

<213> Homo sapiens

<400> 299

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Asp Cys Val Leu Gln Cys Glu Glu Gln Asn Cys Ser Gly Gly Ala
35 40 45

Leu Asn His Phe Arg Ser Arg Gln Pro Ile Tyr Met Ser Leu Ala
50 55 60

Gly Trp Thr Cys Arg Asp Asp Cys Lys Tyr Glu Cys Met Trp Val
65 70 75

Thr	Val	Gly	Leu	Tyr	Leu	Gln	Glu	Gly	His	Lys	Val	Pro	Gln	Phe	
				80					85					90	
His	Gly	Lys	Trp	Pro	Phe	Ser	Arg	Phe	Leu	Phe	Phe	Gln	Glu	Pro	
				95					100					105	
Ala	Ser	Ala	Val	Ala	Ser	Phe	Leu	Asn	Gly	Leu	Ala	Ser	Leu	Val	
				110					115					120	
Met	Leu	Cys	Arg	Tyr	Arg	Thr	Phe	Val	Pro	Ala	Ser	Ser	Pro	Met	
				125					130					135	
Tyr	His	Thr	Cys	Val	Ala	Phe	Ala	Trp	Val	Ser	Leu	Asn	Ala	Trp	
				140					145					150	
Phe	Trp	Ser	Thr	Val	Phe	His	Thr	Arg	Asp	Thr	Asp	Leu	Thr	Glu	
				155					160					165	
Lys	Met	Asp	Tyr	Phe	Cys	Ala	Ser	Thr	Val	Ile	Leu	His	Ser	Ile	
				170					175					180	
Tyr	Leu	Cys	Cys	Val	Arg	Thr	Val	Gly	Leu	Gln	His	Pro	Ala	Val	
				185					190					195	
Val	Ser	Ala	Phe	Arg	Ala	Leu	Leu	Leu	Leu	Met	Leu	Thr	Val	His	
				200					205					210	
Val	Ser	Tyr	Leu	Ser	Leu	Ile	Arg	Phe	Asp	Tyr	Gly	Tyr	Asn	Leu	
				215					220					225	
Val	Ala	Asn	Val	Ala	Ile	Gly	Leu	Val	Asn	Val	Val	Trp	Trp	Leu	
				230					235					240	
Ala	Trp	Cys	Leu	Trp	Asn	Gln	Arg	Arg	Leu	Pro	His	Val	Arg	Lys	
				245					250					255	
Cys	Val	Val	Val	Val	Leu	Leu	Leu	Gln	Gly	Leu	Ser	Leu	Leu	Glu	
				260					265					270	
Leu	Leu	Asp	Phe	Pro	Pro	Leu	Phe	Trp	Val	Leu	Asp	Ala	His	Ala	
				275					280					285	
Ile	Trp	His	Ile	Ser	Thr	Ile	Pro	Val	His	Val	Leu	Phe	Phe	Ser	
				290					295					300	
Phe	Leu	Glu	Asp	Asp	Ser	Leu	Tyr	Leu	Leu	Lys	Glu	Ser	Glu	Asp	
				305					310					315	
Lys	Phe	Lys	Leu	Asp											
				320											

<210> 300
 <211> 1674
 <212> DNA
 <213> Homo sapiens

<400> 300
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gatgccgaag tcctggaggt gttccacccg acgcatgagt ggcaggccct 300
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cccattgagg aactgaagaa agactttgat gagctgaatg ttgtcattga 600
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aaaaaaaaaa aaaaaaaaaa aaaa 1674

<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301

Met	Ala	Pro	Gln	Ser	Leu	Pro	Ser	Ser	Arg	Met	Ala	Pro	Leu	Gly	1	5	10	15
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Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

290	295	300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln Val	
305	310	315
Leu Arg Thr Leu Val Gln Glu Lys Gly	Thr Glu Val Leu Ala Val	
320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu	Val Thr Glu Lys Met Phe	
335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln	Glu Met Ser Pro Glu Lys	
350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu	Leu Pro Gly Leu Trp Glu	
365	370	375
Gln Gly Trp Cys Glu Ile Thr Ala His	Leu Leu Ala Leu Pro Glu	
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln	Thr Leu Gly Val Leu Leu	
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln	Asp Pro Gln Leu Gly Arg	
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr	Gln Val Leu Ala Ser Leu	
425	430	435
Glu Leu Gln Asp Gly Glu Asp Glu Gly	Tyr Phe Gln Glu Leu Leu	
440	445	450
Gly Ser Val Asn Ser Leu Leu Lys Glu	Leu Arg	
455	460	

<210> 302
 <211> 2136
 <212> DNA
 <213> Homo sapiens

<400> 302
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<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303
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 Arg Val Ile Ile Leu Val Ala Gly Ala Phe Phe Trp Leu Val Ser
 35 40 45
 Leu Leu Leu Ala Ser Val Val Trp Phe Ile Leu Val His Val Thr
 50 55 60
 Asp Arg Ser Asp Ala Arg Leu Gln Tyr Gly Leu Leu Ile Phe Gly
 65 70 75
 Ala Ala Val Ser Val Leu Leu Gln Glu Val Phe Arg Phe Ala Tyr
 80 85 90
 Tyr Lys Leu Leu Lys Lys Ala Asp Glu Gly Leu Ala Ser Leu Ser
 95 100 105
 Glu Asp Gly Arg Ser Pro Ile Ser Ile Arg Gln Met Ala Tyr Val
 110 115 120
 Ser Gly Leu Ser Phe Gly Ile Ile Ser Gly Val Phe Ser Val Ile
 125 130 135
 Asn Ile Leu Ala Asp Ala Leu Gly Pro Gly Val Val Gly Ile His
 140 145 150
 Gly Asp Ser Pro Tyr Tyr Phe Leu Thr Ser Ala Phe Leu Thr Ala
 155 160 165
 Ala Ile Ile Leu Leu His Thr Phe Trp Gly Val Val Phe Phe Asp
 170 175 180
 Ala Cys Glu Arg Arg Arg Tyr Trp Ala Leu Gly Leu Val Val Gly
 185 190 195
 Ser His Leu Leu Thr Ser Gly Leu Thr Phe Leu Asn Pro Trp Tyr
 200 205 210
 Glu Ala Ser Leu Leu Pro Ile Tyr Ala Val Thr Val Ser Met Gly
 215 220 225
 Leu Trp Ala Phe Ile Thr Ala Gly Gly Ser Leu Arg Ser Ile Gln
 230 235 240
 Arg Ser Leu Leu Cys Lys Asp
 245

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
 <222> 108, 123, 126, 154, 198, 206, 217
 <223> unknown base

 <400> 304
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 ccttcggnat catcagtggg gtnttntctg ttatcaatat tttggctgat 150
 gcanttgggc caggtgtggg tgggatccat ggagactcac cctattantt 200
 cctganttca gccttnttga cagcagccat tatcctgctc 240

<210> 305
 <211> 378
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
 <223> unknown base

<400> 305
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 ctgcttaaga aggcagatga gggggttagca tngctgagtg aggacggaag 150
 atcacccatt tccatccgcc agatggccta tgtttntggt ntttccttcg 200
 gtatcatcag tgggtgtttt tctgttatca atattttggn tgatgcantt 250
 gggccagggtg tgggtgggat ccatggagan tcaccctatt aattcctgaa 300
 ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350
 ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
 <211> 655
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1, 22, 129, 133, 184
 <223> unknown base

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 gcgttgccac cccacgcgga cccccagnt ggngcgccct tccattttgc 150
 ctgtcctggt caggccccca ccccccttc cacntgacca gccatggggg 200
 ctgcggtgtt tttcggctgc actttcgtcg cgttcggccc ggccttcgcg 250

cttttcttga tcaactgtggc tggggacccg cttcgcgtta tcatcctggt 300
 cgcaggggca tttttctggc tgggtctcct gctcctggcc tctgtggtct 350
 ggttcatctt ggtccatgtg accgaccggt cagatgcccg gctccagtac 400
 ggcctcctga tttttggtgc tgctgtctct gtccttctac aggaggtggt 450
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag gggtttagcat 500
 cgctgagtga ggacggaaga tcaacctatc ccatccgcca gatggcctat 550
 gtttctggtc tctccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600
 tattttggct gatgcacttg gggcaggtgt ggttgggatc catggagact 650
 cacc 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
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 cgttgccacc ccacgcggac tccccagntg ggcgcacct cccatttgcc 150
 tgtcctggtc agggccccac ccccttccc acctgaccag ccatgggggc 200
 tgcggtgttt ttcgggctgc actttogtgc cgttcggggc cggccttcgc 250
 gcttttcttg atcaactgtg ctggggaccc gcttcgcgtt atcatcctgg 300
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 tggttcatct tgggtccatgt gaccgaccgg tcagatgcc ggctccagta 400
 cggcctcctg atttttggtg ctgctgtctc tgctcttcta caggaggtgt 450
 tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500
 tcgctgagtg aggacggaag atcacccatc tccatccgcc agatggccta 550
 tgtttctggt ctctccttcg gtatcatcag tgggtgtctc totgttatca 600
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<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
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ctggtgaggg tggtcagca ggcagggaag gagaggtgtc tgtgcgtcct 200
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gcggggggtt cgtctcaatc tcctggggc actttcatcc tcaagctcag 1500
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ctgagaagtg gaaaaaaaaa 1570

<210> 309

[illegible]

278

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
 tcctgtgacc acccctctaa cacc 24

<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgcccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
 gtcgcatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50

<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
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Glu	His	Gln	Ala	Gln 125	Pro	Arg	Leu	Val	Gly 130	Asp	Gln	Glu	Gln	Glu 135
Leu	Leu	Asp	Thr	Leu 140	Ala	Asp	Gln	Leu	Pro 145	Arg	Leu	Leu	Ala	Arg 150
Ala	Ser	Glu	Leu	Gln 155	Thr	Glu	Cys	Met	Gly 160	Leu	Arg	Lys	Gly	His 165
Gly	Thr	Leu	Gly	Gln 170	Gly	Leu	Ser	Ala	Leu 175	Gln	Ser	Glu	Gln	Gly 180
Arg	Leu	Ile	Gln	Leu 185	Leu	Ser	Glu	Ser	Gln 190	Gly	His	Met	Ala	His 195
Leu	Val	Asn	Ser	Val 200	Ser	Asp	Ile	Leu	Asp 205	Ala	Leu	Gln	Arg	Asp 210
Arg	Gly	Leu	Gly	Arg 215	Pro	Arg	Asn	Lys	Ala 220	Asp	Leu	Gln	Arg	Ala 225
Pro	Ala	Arg	Gly	Thr 230	Arg	Pro	Arg	Gly	Cys 235	Ala	Thr	Gly	Ser	Arg 240
Pro	Arg	Asp	Cys	Leu 245	Asp	Val	Leu	Leu	Ser 250	Gly	Gln	Gln	Asp	Asp 255
Gly	Val	Tyr	Ser	Val 260	Phe	Pro	Thr	His	Tyr 265	Pro	Ala	Gly	Phe	Gln 270
Val	Tyr	Cys	Asp	Met 275	Arg	Thr	Asp	Gly	Gly 280	Gly	Trp	Thr	Val	Phe 285
Gln	Arg	Arg	Glu	Asp 290	Gly	Ser	Val	Asn	Phe 295	Phe	Arg	Gly	Trp	Asp 300
Ala	Tyr	Arg	Asp	Gly 305	Phe	Gly	Arg	Leu	Thr 310	Gly	Glu	His	Trp	Leu 315
Gly	Leu	Lys	Arg	Ile 320	His	Ala	Leu	Thr	Thr 325	Gln	Ala	Ala	Tyr	Glu 330
Leu	His	Val	Asp	Leu 335	Glu	Asp	Phe	Glu	Asn 340	Gly	Thr	Ala	Tyr	Ala 345
Arg	Tyr	Gly	Ser	Phe 350	Gly	Val	Gly	Leu	Phe 355	Ser	Val	Asp	Pro	Glu 360
Glu	Asp	Gly	Tyr	Pro 365	Leu	Thr	Val	Ala	Asp 370	Tyr	Ser	Gly	Thr	Ala 375
Gly	Asp	Ser	Leu	Leu 380	Lys	His	Ser	Gly	Met 385	Arg	Phe	Thr	Thr	Lys 390
Asp	Arg	Asp	Ser	Asp 395	His	Ser	Glu	Asn	Asn 400	Cys	Ala	Ala	Phe	Tyr 405
Arg	Gly	Ala	Trp	Trp 410	Tyr	Arg	Asn	Cys	His 415	Thr	Ser	Asn	Leu	Asn 420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
425 430 435

Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
440 445 450

Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
455 460

<210> 315
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 315
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<210> 316
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 316
gaccagcagg gcccaaggaca agg 23

<210> 317
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 317
gttctctgag atgaagatcc ggccggtccg ggagtaccgc ttag 44

<210> 318
<211> 1841
<212> DNA
<213> Homo sapiens

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<210> 319
 <211> 280
 <212> PRT
 <213> Homo sapiens

<400> 319

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				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
				35					40					45
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
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Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
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Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
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Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
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Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160					165
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175					180
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190					195
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu
				200					205					210
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile
				215					220					225
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu
				230					235					240
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys
				245					250					255
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His
				260					265					270
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp					
				275					280					

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
 <221> unsure
 <222> 59, 95, 149, 331, 364, 438, 446
 <223> unknown base

<400> 320
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 cttttgccac aattcggcat ccagagcccc ggcgcacaga gcacagggnt 150
 cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200
 ggtgctgctg atagggctgg cagccctggg gcttttgttt tttcagtact 250
 accagctctc caatactggt caagacacca tttctcaaat ggaagaaaga 300
 ttaggaaata cgtcccaaga gttgcaattt nttcaagtcc agaataataa 350
 gcttgacaga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400
 ataacaaagc tggaggaact ttgaaggagg gcaaagtntc ctcatntact 450
 atacacacac cacttccc 468

<210> 321
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 321
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<210> 322
 <211> 23
 <212> DNA
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<220>
 <223> Synthetic oligonucleotide probe

<400> 322
 catgctgacg acttcctgca agc 23

<210> 323
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<220>
 <223> Synthetic oligonucleotide probe

<400> 323
 ccacacagtc tctgcttctt ggg 23

<210> 324
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 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

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<210> 325
<211> 2988

<212> DNA

<213> Homo sapiens

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cccgggtccc cccctcggga gactcctctg gctgctctgg gggttcgccg 200
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<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

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35 40 45

Gly Asp Ser Glu Leu Pro Pro Arg Gly Asn Thr Asn Ala Ala Arg
50 55 60

Arg Pro Asn Ser Val Gln Pro Gly Ala Glu Arg Glu Lys Pro Gly
65 70 75

Ala Gly Glu Gly Ala Gly Glu Asn Trp Glu Pro Arg Val Leu Pro
80 85 90

Tyr His Pro Ala Gln Pro Gly Gln Ala Ala Lys Lys Ala Val Arg
95 100 105

Thr Arg Tyr Ile Ser Thr Glu Leu Gly Ile Arg Gln Arg Leu Leu
110 115 120

Val Ala Val Leu Thr Ser Gln Thr Thr Leu Pro Thr Leu Gly Val
125 130 135

Ala Val Asn Arg Thr Leu Gly His Arg Leu Glu Arg Val Val Phe
140 145 150

Leu Thr Gly Ala Arg Gly Arg Arg Ala Pro Pro Gly Met Ala Val
155 160 165

Val Thr Leu Gly Glu Glu Arg Pro Ile Gly His Leu His Leu Ala
170 175 180

Leu Arg His Leu Leu Glu Gln His Gly Asp Asp Phe Asp Trp Phe
185 190 195

Phe Leu Val Pro Asp Thr Thr Tyr Thr Glu Ala His Gly Leu Ala
200 205 210

Arg Leu Thr Gly His Leu Ser Leu Ala Ser Ala Ala His Leu Tyr
215 220 225

Leu Gly Arg Pro Gln Asp Phe Ile Gly Gly Glu Pro Thr Pro Gly
230 235 240

Arg Tyr Cys His Gly Gly Phe Gly Val Leu Leu Ser Arg Met Leu
245 250 255

Leu Gln Gln Leu Arg Pro His Leu Glu Gly Cys Arg Asn Asp Ile
260 265 270

Val Ser Ala Arg	Pro Asp Glu Trp Leu	Gly Arg Cys Ile Leu	Asp
	275	280	285
Ala Thr Gly Val	Gly Cys Thr Gly Asp	His Glu Gly Val His	Tyr
	290	295	300
Ser His Leu Glu	Leu Ser Pro Gly Glu	Pro Val Gln Glu Gly	Asp
	305	310	315
Pro His Phe Arg	Ser Ala Leu Thr Ala	His Pro Val Arg Asp	Pro
	320	325	330
Val His Met Tyr	Gln Leu His Lys Ala	Phe Ala Arg Ala Glu	Leu
	335	340	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu	Leu Gln Trp Glu Ile	Gln
	350	355	360
Asn Thr Ser His	Leu Ala Val Asp Gly	Asp Arg Ala Ala Ala	Trp
	365	370	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg	Pro Ala Ser Arg Phe	Glu
	380	385	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu	Gln His Ala Phe Ser	Cys
	395	400	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu	Arg Gly Ala Asp Arg	Ala
	410	415	420
Asp Val Ala Asp	Val Leu Gly Thr Ala	Leu Glu Glu Leu Asn	Arg
	425	430	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln	Lys Gln Gln Leu Val	Asn
	440	445	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg	Gly Met Glu Tyr Thr	Leu
	455	460	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro	Gln Gly Gly Arg Arg	Pro
	470	475	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg	Pro Leu Ser Arg Val	Glu
	485	490	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu	Ala Ser Arg Leu Thr	Val
	500	505	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg	Asp Leu Ala Pro Gly	Phe
	515	520	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu	Glu Pro Gly Asp Ala	Ala
	530	535	540
Ala Ala Leu Thr	Leu Leu Leu Leu Tyr	Glu Pro Arg Gln Ala	Gln
	545	550	555
Arg Val Ala His	Ala Asp Val Phe Ala	Pro Val Lys Ala His	Val
	560	565	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly	Ala Arg Val Pro Trp	Leu
	575	580	585

Ser	Val	Gln	Thr	Ala	Ala	Pro	Ser	Pro	Leu	Arg	Leu	Met	Asp	Leu	
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Leu	Ser	Lys	Lys	His	Pro	Leu	Asp	Thr	Leu	Phe	Leu	Leu	Ala	Gly	
				605					610					615	
Pro	Asp	Thr	Val	Leu	Thr	Pro	Asp	Phe	Leu	Asn	Arg	Cys	Arg	Met	
				620					625					630	
His	Ala	Ile	Ser	Gly	Trp	Gln	Ala	Phe	Phe	Pro	Met	His	Phe	Gln	
				635					640					645	
Ala	Phe	His	Pro	Gly	Val	Ala	Pro	Pro	Gln	Gly	Pro	Gly	Pro	Pro	
				650					655					660	
Glu	Leu	Gly	Arg	Asp	Thr	Gly	Arg	Phe	Asp	Arg	Gln	Ala	Ala	Ser	
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Glu	Ala	Cys	Phe	Tyr	Asn	Ser	Asp	Tyr	Val	Ala	Ala	Arg	Gly	Arg	
				680					685					690	
Leu	Ala	Ala	Ala	Ser	Glu	Gln	Glu	Glu	Glu	Leu	Leu	Glu	Ser	Leu	
				695					700					705	
Asp	Val	Tyr	Glu	Leu	Phe	Leu	His	Phe	Ser	Ser	Leu	His	Val	Leu	
				710					715					720	
Arg	Ala	Val	Glu	Pro	Ala	Leu	Leu	Gln	Arg	Tyr	Arg	Ala	Gln	Thr	
				725					730					735	
Cys	Ser	Ala	Arg	Leu	Ser	Glu	Asp	Leu	Tyr	His	Arg	Cys	Leu	Gln	
				740					745					750	
Ser	Val	Leu	Glu	Gly	Leu	Gly	Ser	Arg	Thr	Gln	Leu	Ala	Met	Leu	
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 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

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atggctcagt gtgcagacag 20

<210> 330
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<400> 330
gcatgctgct ccgtgaagta gtcc 24

<210> 331
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<212> DNA
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<400> 331
atgcatggga aagaaggcct gccc 24

<210> 332
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<212> DNA
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<210> 333
<211> 1095
<212> DNA
<213> Homo sapiens

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gcttttttaga agcttgattt cctttgaaga tgaaagacta gcggaagctc 200
tgccctctttc ccagtgggc gaggggaactc ggggcgattg gctgggaact 250
gtatccaccc aaatgtcacc gattttcttc tatgcaggaa atgagcagac 300
ccatcaataa gaaattttctc agcctggccg aaaatggttg gccccacgaa 350
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400

aaaaccaa at cagatctggg acctatatag cgtggcggag gcggggcgat 450
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ctgcttcgac ccagcaaga tccagctgcc agaggatgag tgaccagttg 1000
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<211> 153
<212> PRT
<213> Homo sapiens

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Ser Ser Phe Ser Arg Thr Val Val Ala Pro Ser Ala Val Ala Gly
35 40 45
Lys Arg Pro Pro Glu Pro Thr Thr Pro Trp Gln Glu Asp Pro Glu
50 55 60
Pro Glu Asp Glu Asn Leu Tyr Glu Lys Asn Pro Asp Ser His Gly
65 70 75
Tyr Asp Lys Asp Pro Val Leu Asp Val Trp Asn Met Arg Leu Val
80 85 90
Phe Phe Phe Gly Val Ser Ile Ile Leu Val Leu Gly Ser Thr Phe
95 100 105
Val Ala Tyr Leu Pro Asp Tyr Arg Met Lys Glu Trp Ser Arg Arg
110 115 120
Glu Ala Glu Arg Leu Val Lys Tyr Arg Glu Ala Asn Gly Leu Pro
125 130 135
Ile Met Glu Ser Asn Cys Phe Asp Pro Ser Lys Ile Gln Leu Pro
140 145 150

Glu Asp Glu

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<212> DNA
<213> Homo sapiens

<400> 335
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aggactgtgg tcgccccgtc cgctgtggcg ggaaagcggc cccagaacc 150
gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgtatg 200
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tggaacatgc gacttgtctt cttctttggc gtctccatca tcctggtcct 300
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<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
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<210> 337
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<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgcttctt gagccccact tagc 24

<210> 338
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<220>
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<400> 338
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<210> 339
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<212> DNA

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cggccaactc	agtcaccaag	gtttccatcc	agtttgagcg	ggcgtgctg	1350
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atctgtcctc	agcgcccttg	tgcccagcat	ggtagcagcc	aagccagtgg	1450
actgggaaga	gagtcccttc	ttcaacagcc	tgttccagct	ctctgatggc	1500

tctaactact ttgtgcggct ctacacggag ccgctgctgg tgaacctgcc 1550
gacaccggac ttcagcatgc cctacaacgt gatctgcctc acgtgcactg 1600
tgggtggcgt gtgctacggc tcctttctaca atctcctcac ccgaaccttc 1650
cacatcgagg agccccgcac aggtggcctg gccaaagcggc tggccaacct 1700
tatccggcgc gcccgagggtg tccccccact ctgattcttg ccctttccag 1750
cagctgcagc tgccgtttct ctctggggag gggagcccaa gggctgtttc 1800
tgccacttgc tctcctcaga gttggctttt gaaccaaagt gccctggacc 1850
aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900
gtggcatttg aatttgaatt aacttagaaa ttcatttcct cacctgtagt 1950
ggccacctct atattgaggt gctcaataag caaaagtggc cgggtggctgc 2000
tgtattggac agcacagaaa aagatttcca tcaccacaga aaggtcggct 2050
ggcagcactg gccaaaggta tgggggtgtgc tacacagtgt atgtcactgt 2100
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttccgtgg 2150
aaaaaaaaaa aa 2162

<210> 340
<211> 574
<212> PRT
<213> Homo sapiens

<400> 340
Met Pro Leu Ala Leu Leu Val Leu Leu Leu Leu Gly Pro Gly Gly
1 5 10 15
Trp Cys Leu Ala Glu Pro Pro Arg Asp Ser Leu Arg Glu Glu Leu
20 25 30
Val Ile Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln
35 40 45
Phe Arg Thr Arg Trp Asp Ser Glu Leu Gln Arg Glu Gly Val Ser
50 55 60
His Tyr Arg Leu Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys
65 70 75
Tyr Ser Leu Arg Glu Leu His Leu Ser Phe Thr Gln Gly Phe Trp
80 85 90
Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln Ala Pro Ser Gly
95 100 105
Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr Asp Val Asp
110 115 120
Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile Phe Cys
125 130 135
Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro Thr
140 145 150

Val Leu Ser Ala Leu Val Pro Ser Met Val Ala Ala Lys Pro Val
470 475 480

Asp Trp Glu Glu Ser Pro Leu Phe Asn Ser Leu Phe Pro Val Ser
485 490 495

Asp Gly Ser Asn Tyr Phe Val Arg Leu Tyr Thr Glu Pro Leu Leu
500 505 510

Val Asn Leu Pro Thr Pro Asp Phe Ser Met Pro Tyr Asn Val Ile
515 520 525

Cys Leu Thr Cys Thr Val Val Ala Val Cys Tyr Gly Ser Phe Tyr
530 535 540

Asn Leu Leu Thr Arg Thr Phe His Ile Glu Glu Pro Arg Thr Gly
545 550 555

Gly Leu Ala Lys Arg Leu Ala Asn Leu Ile Arg Arg Ala Arg Gly
560 565 570

Val Pro Pro Leu

<210> 341
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 341
tggacaccgt accctggtat ctgc 24

<210> 342
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic oligonucleotide probe

<400> 342
ccaactctga ggagagcaag tggc 24

<210> 343
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 343
tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344
<211> 762
<212> DNA
<213> Homo sapiens

<400> 344
 caacatgggg tccagcagct tcttggtcct catggtgtct ctcgttcttg 50
 tgaccctggg ggctgtggaa ggagttaaag agggatataga gaaagcaggg 100
 gtttgcccag ctgacaacgt acgctgcttc aagtcggatc ctccccagtg 150
 tcacacagac caggactgtc tgggggaaag gaagtgttgt tacctgcact 200
 gtggcttcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaaac 250
 aaggatgaag atgtgtcaag gccataccct gagccaggat gggaggccaa 300
 gtgtccaggc tcctcctcta ccagggtgtcc tcagaaatga tgctgggtcc 350
 tttctacctc tgggggtcac tctcaacttg cacctgcccc tgagggtcct 400
 gagacttgga atatggaaga agcaataccc aacccccacca aagaaaacct 450
 gagcttgaag tccttttccc caaaaagagg gaagagtcac aaaaagtcca 500
 gaccccaggg acggtacttt ccctctctac ctggtgctcc tccctaattg 550
 tcatgaatgg acccctcatg aatgaaacca gtgcccttat aagagacccc 600
 aaagagctgc cttgcccttc tgcaatgtgt gatcacagct agaaggcact 650
 gtcagagaag agaaactggc cctcaccaga tgctgaatct gctgggtgcct 700
 tgatcttgga cttcccagcc tctagaactg taagaaataa atatttgctg 750
 tttataatcc aa 762

<210> 345
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 345
 Met Gly Ser Ser Ser Phe Leu Val Leu Met Val Ser Leu Val Leu
 1 5 10 15
 Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys
 20 25 30
 Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp
 35 40 45
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys
 50 55 60
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys
 65 70 75
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro
 80 85 90
 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser
 95 100 105
 Thr Arg Cys Pro Gln Lys
 110

<210> 346
 <211> 2528
 <212> DNA
 <213> Homo sapiens

<400> 346
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 ttcctggcca ggaaacctga gcggtgagac tcccagctgc ctacatcaag 100
 gccccaggac atgcagaacc ttctctaga acccgacca ccaccatgag 150
 gtcttgcttg tggagatgca ggcacctgag ccaaggcgtc cagtggctct 200
 tgcttctggc tgtcctggtc ttctttctct tgccttgcc ctcttttatt 250
 aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaacattaa 300
 agaaaggtct ctacagtccc tggcaaagcc taagtcccag gcaccacaa 350
 gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400
 ctcaacacac aaaccagcc caaggccac accaccggag acagaggaaa 450
 ggaggccaac caggcaccgc cggaggagca ggacaagggtg cccacacag 500
 cacagagggc agcatggaag agcccagaaa aagagaaaac catggtgaac 550
 aactgtcac ccagagggca agatgcaggg atggcctctg gcaggacaga 600
 ggcaaatca tggaagagcc aggacacaaa gacgaccaa ggaaatgggg 650
 gccagaccag gaagctgacg gcctccagga cgggtgtcaga gaagcaccag 700
 ggcaaagcgg caaccacagc caagacgctc attcccaaaa gtcagcacag 750
 aatgctggct cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800
 tgaccacagc agtcatcca cctaaggaga agaaacctca ggccaccca 850
 cccctgccc ctttccagag cccacgacg cagagaaacc aaagactgaa 900
 ggccgccaac ttcaaactctg agcctcgggtg ggattttgag gaaaaatata 950
 gcttcgaaat aggaggcctt cagacgactt gccctgactc tgtgaagatc 1000
 aaagcctcca agtcgctgtg gctccagaaa ctctttctgc ccaacctcac 1050
 tctcttctg gactccagac acttcaacca gagtgagtgg gaccgcctgg 1100
 aacactttgc accacccttt ggcttcatgg agctcaacta ctcttggtg 1150
 cagaaggtcg tgacacgctt ccctccagtg cccagcagc agctgctcct 1200
 ggccagcctc cccgctggga gcctccggtg catcactgt gccgtgggtg 1250
 gcaacggggg catcctgaac aactcccaca tgggcccagga gatagacagt 1300
 cagactacg tgttccgatt gagcggagct ctcatataag gctacgaaca 1350
 ggatgtgggg actcggacat ccttctacgg ctttaccgcc ttctccctga 1400
 cccagtcact ccttatattg ggcaatcggg gtttcaagaa cgtgcctctt 1450

gggaaggacg tccgctactt gcacttctctg gaaggcaccg gggactatga 1500
gtggctggaa gcactgctta tgaatcagac ggtgatgtca aaaaaccttt 1550
tctgggttcag gcacagaccc caggaagctt ttgggaagc cctgcacatg 1600
gacaggtacc tgttgctgca cccagacttt ctccgataca tgaagaacag 1650
gtttctgagg tctaagaccc tggatggtgc ccactggagg atataccgcc 1700
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ctactatgat acatcatgga agcggctgat cttttacata aaccatgact 1850
tcaagctgga gagagaagtc tggaagcggc tacacgatga agggataatc 1900
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caataccaca attcctgctg aaaaacactc ttccagtcca aaagcttctt 2250
gatacagaaa aaagagcctg gatTTTcaga aacatataga tctggTTTga 2300
attccagatc gagTTTcag ttgtgaaatc ttgaaggat tactttaactt 2350
cactacagat tgtctagaag acctTTctag gagTTatctg attctagaag 2400
ggTctatact tgtccttgTc tTTaagctat ttgacaactc tacgtgtTgt 2450
agaaaaactga taataatata aatgattgtt gtccatggaa aggcaaataa 2500
atTTTctaca gtgaaaaaaa aaaaaaaa 2528

<210> 347

<211> 600

<212> PRT

<213> Homo sapiens

<400> 347

Met	Arg	Ser	Cys	Leu	Trp	Arg	Cys	Arg	His	Leu	Ser	Gln	Gly	Val
1				5					10					15
Gln	Trp	Ser	Leu	Leu	Leu	Ala	Val	Leu	Val	Phe	Phe	Leu	Phe	Ala
			20						25					30
Leu	Pro	Ser	Phe	Ile	Lys	Glu	Pro	Gln	Thr	Lys	Pro	Ser	Arg	His
			35						40					45
Gln	Arg	Thr	Glu	Asn	Ile	Lys	Glu	Arg	Ser	Leu	Gln	Ser	Leu	Ala
			50						55					60
Lys	Pro	Lys	Ser	Gln	Ala	Pro	Thr	Arg	Ala	Arg	Arg	Thr	Thr	Ile

Arg Leu Ser Gly	Ala Leu Ile Lys Gly	Tyr Glu Gln Asp Val Gly	380	385	390
	395	400			405
Thr Arg Thr Ser	Phe Tyr Gly Phe Thr	Ala Phe Ser Leu Thr Gln			
	410	415			420
Ser Leu Leu Ile	Leu Gly Asn Arg Gly	Phe Lys Asn Val Pro Leu			
	425	430			435
Gly Lys Asp Val	Arg Tyr Leu His Phe	Leu Glu Gly Thr Arg Asp			
	440	445			450
Tyr Glu Trp Leu	Glu Ala Leu Leu Met	Asn Gln Thr Val Met Ser			
	455	460			465
Lys Asn Leu Phe	Trp Phe Arg His Arg	Pro Gln Glu Ala Phe Arg			
	470	475			480
Glu Ala Leu His	Met Asp Arg Tyr Leu	Leu Leu His Pro Asp Phe			
	485	490			495
Leu Arg Tyr Met	Lys Asn Arg Phe Leu	Arg Ser Lys Thr Leu Asp			
	500	505			510
Gly Ala His Trp	Arg Ile Tyr Arg Pro	Thr Thr Gly Ala Leu Leu			
	515	520			525
Leu Leu Thr Ala	Leu Gln Leu Cys Asp	Gln Val Ser Ala Tyr Gly			
	530	535			540
Phe Ile Thr Glu	Gly His Glu Arg Phe	Ser Asp His Tyr Tyr Asp			
	545	550			555
Thr Ser Trp Lys	Arg Leu Ile Phe Tyr	Ile Asn His Asp Phe Lys			
	560	565			570
Leu Glu Arg Glu	Val Trp Lys Arg Leu	His Asp Glu Gly Ile Ile			
	575	580			585
Arg Leu Tyr Gln	Arg Pro Gly Pro Gly	Thr Ala Lys Ala Lys Asn			
	590	595			600

<210> 348
 <211> 496
 <212> DNA
 <213> Homo sapiens

<400> 348
 cgatgcgcgg acccgggcac cccctcctcc tggggctgct gctggtgctg 50
 gggccttcgc oggagcagcg agtggaaatt gttcctcgag atctgaggat 100
 gaaggacaag tttctaaaac accttacagg ccctctttat tttagtccaa 150
 agtgcagcaa acacttccat agactttatc acâacaccag agactgcacc 200
 attcctgcat actataaaag atgcgccagg cttcttacct ggctggctgt 250
 cagtccagtg tgcattggagg ataagtgagc agaccgtaca ggagcagcac 300
 accaggagcc atgagaagtg ccttggaac caacagggaa acagaactat 350

actctaccca gctgggcccc cagtctacaa ccctgcagct cctcctccct 650
 atatgccacc acagccctct taccgggag cctgaggaac cagccatgtc 700
 tctgctgccc cttcagtgat gccaaccttg ggagatgccc tcatcctgta 750
 cctgcatctg gtccctggggg tggcaggagt cctccagcca ccaggcccca 800
 gaccaagcca agccctgggc cctactgggg acagagcccc aggggaagtgg 850
 aacaggagct gaactagaac tatgaggggt tggggggagg gcttggaatt 900
 atgggctatt tttactgggg gcaaggagg gagatgacag cctgggtcac 950
 agtgccctgtt ttcaaatagt ccctctgctc ccaagatccc agccaggaag 1000
 gctggggccc tactgtttgt cccctctggg ctgggggtggg gggagggagg 1050
 aggttccgtc agcagctggc agtagccctc ctctctggct gcccactgg 1100
 ccacatctct ggctgctag attaaagctg taaagacaaa a 1141

<210> 351
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 351
 Met Pro Pro Ala Gly Leu Arg Arg Ala Ala Pro Leu Thr Ala Ile
 1 5 10 15
 Ala Leu Leu Val Leu Gly Ala Pro Leu Val Leu Ala Gly Glu Asp
 20 25 30
 Cys Leu Trp Tyr Leu Asp Arg Asn Gly Ser Trp His Pro Gly Phe
 35 40 45
 Asn Cys Glu Phe Phe Thr Phe Cys Cys Gly Thr Cys Tyr His Arg
 50 55 60
 Tyr Cys Cys Arg Asp Leu Thr Leu Leu Ile Thr Glu Arg Gln Gln
 65 70 75
 Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala
 80 85 90
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys
 95 100 105
 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln
 110 115 120
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile
 125 130 135
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly
 140 145 150
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro
 155 160 165
 Ala Pro Gln Tyr Pro Leu Tyr Pro Ala Gly Pro Pro Val Tyr Asn
 170 175 180

aacgtatgta aaaattcctc ccttgcccggt ttcctgttat ctctaatacac 2950
 caacattttg ttgagtgtat tttcaaacta gagatggctg ttttggctcc 3000
 aactggagat acttttttcc cttcaactca ttttttgact atccctgtga 3050
 aaagaatagc tgtagtttt tcatgaatgg gctttttcat gaatgggcta 3100
 tcgctacat gtgttttgtt catcacaggt gttgccctgc aacgtaaacc 3150
 caagtgttgg gttccctgcc acagaagaat aaagtacctt attcttctca 3200
 aaaaaaaaaa aaaaaaaaaa aaaaaa 3226

<210> 353
 <211> 941
 <212> PRT
 <213> Homo sapiens

<400> 353
 Met Val Phe Leu Pro Leu Lys Trp Ser Leu Ala Thr Met Ser Phe
 1 5 10 15
 Leu Leu Ser Ser Leu Leu Ala Leu Leu Thr Val Ser Thr Pro Ser
 20 25 30
 Trp Cys Gln Ser Thr Glu Ala Ser Pro Lys Arg Ser Asp Gly Thr
 35 40 45
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro
 50 55 60
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr
 65 70 75
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr
 80 85 90
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala
 95 100 105
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu
 110 115 120
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala
 125 130 135
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His
 140 145 150
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser
 155 160 165
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr
 170 175 180
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp
 185 190 195
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu
 200 205 210
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val

	215		220		225
Thr Val Ala Glu Gly Leu Ile Glu Asp His Phe Asp Val Thr Val	230		235		240
Lys Met Ser Thr Tyr Leu Val Ala Phe Ile Ile Ser Asp Phe Glu	245		250		255
Ser Val Ser Lys Ile Thr Lys Ser Gly Val Lys Val Ser Val Tyr	260		265		270
Ala Val Pro Asp Lys Ile Asn Gln Ala Asp Tyr Ala Leu Asp Ala	275		280		285
Ala Val Thr Leu Leu Glu Phe Tyr Glu Asp Tyr Phe Ser Ile Pro	290		295		300
Tyr Pro Leu Pro Lys Gln Asp Leu Ala Ala Ile Pro Asp Phe Gln	305		310		315
Ser Gly Ala Met Glu Asn Trp Gly Leu Thr Thr Tyr Arg Glu Ser	320		325		330
Ala Leu Leu Phe Asp Ala Glu Lys Ser Ser Ala Ser Ser Lys Leu	335		340		345
Gly Ile Thr Val Thr Val Ala His Glu Leu Ala His Gln Trp Phe	350		355		360
Gly Asn Leu Val Thr Met Glu Trp Trp Asn Asp Leu Trp Leu Asn	365		370		375
Glu Gly Phe Ala Lys Phe Met Glu Phe Val Ser Val Ser Val Thr	380		385		390
His Pro Glu Leu Lys Val Gly Asp Tyr Phe Phe Gly Lys Cys Phe	395		400		405
Asp Ala Met Glu Val Asp Ala Leu Asn Ser Ser His Pro Val Ser	410		415		420
Thr Pro Val Glu Asn Pro Ala Gln Ile Arg Glu Met Phe Asp Asp	425		430		435
Val Ser Tyr Asp Lys Gly Ala Cys Ile Leu Asn Met Leu Arg Glu	440		445		450
Tyr Leu Ser Ala Asp Ala Phe Lys Ser Gly Ile Val Gln Tyr Leu	455		460		465
Gln Lys His Ser Tyr Lys Asn Thr Lys Asn Glu Asp Leu Trp Asp	470		475		480
Ser Met Ala Ser Ile Cys Pro Thr Asp Gly Val Lys Gly Met Asp	485		490		495
Gly Phe Cys Ser Arg Ser Gln His Ser Ser Ser Ser Ser His Trp	500		505		510
His Gln Glu Gly Val Asp Val Lys Thr Met Met Asn Thr Trp Thr	515		520		525
Leu Gln Arg Gly Phe Pro Leu Ile Thr Ile Thr Val Arg Gly Arg					

				530					535					540	
Asn	Val	His	Met	Lys 545	Gln	Glu	His	Tyr	Met 550	Lys	Gly	Ser	Asp	Gly 555	
Ala	Pro	Asp	Thr	Gly 560	Tyr	Leu	Trp	His	Val 565	Pro	Leu	Thr	Phe	Ile 570	
Thr	Ser	Lys	Ser	Asn 575	Met	Val	His	Arg	Phe 580	Leu	Leu	Lys	Thr	Lys 585	
Thr	Asp	Val	Leu	Ile 590	Leu	Pro	Glu	Glu	Val 595	Glu	Trp	Ile	Lys	Phe 600	
Asn	Val	Gly	Met	Asn 605	Gly	Tyr	Tyr	Ile	Val 610	His	Tyr	Glu	Asp	Asp 615	
Gly	Trp	Asp	Ser	Leu 620	Thr	Gly	Leu	Leu	Lys 625	Gly	Thr	His	Thr	Ala 630	
Val	Ser	Ser	Asn	Asp 635	Arg	Ala	Ser	Leu	Ile 640	Asn	Asn	Ala	Phe	Gln 645	
Leu	Val	Ser	Ile	Gly 650	Lys	Leu	Ser	Ile	Glu 655	Lys	Ala	Leu	Asp	Leu 660	
Ser	Leu	Tyr	Leu	Lys 665	His	Glu	Thr	Glu	Ile 670	Met	Pro	Val	Phe	Gln 675	
Gly	Leu	Asn	Glu	Leu 680	Ile	Pro	Met	Tyr	Lys 685	Leu	Met	Glu	Lys	Arg 690	
Asp	Met	Asn	Glu	Val 695	Glu	Thr	Gln	Phe	Lys 700	Ala	Phe	Leu	Ile	Arg 705	
Leu	Leu	Arg	Asp	Leu 710	Ile	Asp	Lys	Gln	Thr 715	Trp	Thr	Asp	Glu	Gly 720	
Ser	Val	Ser	Glu	Gln 725	Met	Leu	Arg	Ser	Glu 730	Leu	Leu	Leu	Leu	Ala 735	
Cys	Val	His	Asn	Tyr 740	Gln	Pro	Cys	Val	Gln 745	Arg	Ala	Glu	Gly	Tyr 750	
Phe	Arg	Lys	Trp	Lys 755	Glu	Ser	Asn	Gly	Asn 760	Leu	Ser	Leu	Pro	Val 765	
Asp	Val	Thr	Leu	Ala 770	Val	Phe	Ala	Val	Gly 775	Ala	Gln	Ser	Thr	Glu 780	
Gly	Trp	Asp	Phe	Leu 785	Tyr	Ser	Lys	Tyr	Gln 790	Phe	Ser	Leu	Ser	Ser 795	
Thr	Glu	Lys	Ser	Gln 800	Ile	Glu	Phe	Ala	Leu 805	Cys	Arg	Thr	Gln	Asn 810	
Lys	Glu	Lys	Leu	Gln 815	Trp	Leu	Leu	Asp	Glu 820	Ser	Phe	Lys	Gly	Asp 825	
Lys	Ile	Lys	Thr	Gln 830	Glu	Phe	Pro	Gln	Ile 835	Leu	Thr	Leu	Ile	Gly 840	
Arg	Asn	Pro	Val	Gly	Tyr	Pro	Leu	Ala	Trp	Gln	Phe	Leu	Arg	Lys	

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser	Ser		
	860		865		870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr	Arg		
	875		880		885
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys	Glu		
	890		895		900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr	Ile		
	905		910		915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile	Arg		
	920		925		930
Val Trp Leu Gln	Ser Glu Lys Leu Glu	Arg Met			
	935		940		

<210> 354
 <211> 1587
 <212> DNA
 <213> Homo sapiens

<400> 354
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 tcctcctccc actgccagga gtgcaggcgc tgctctgcca gtttgggaca 100
 gttcagcatg tgtggaaggt gtccgacctc ccccggaat ggacccctaa 150
 gaacaccagc tgcgacagcg gcttgggggtg ccaggacacg ttgatgctca 200
 ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcaaggag 250
 gccaaggacc aggagccccg cgtcactgag caccggatgg gccccggcct 300
 ctccctgatc tcctacacct tcgtgtgccg ccaggaggac ttctgcaaca 350
 acctcgttaa ctccctcccg ctttggggccc cacagcccc agcagacca 400
 ggatccttga ggtgcccagt ctgcttgtct atggaaggct gtctggaggg 450
 gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500
 tcctcaggct caggggagga ggcattctct ccaatctgag agtccaggga 550
 tgcatgcccc agccagggtg caacctgctc aatgggacac aggaaattgg 600
 gcccggtgggt atgactgaga actgcaatag gaaagatttt ctgacctgtc 650
 atcgggggac caccattatg acacacggaa acttgggtca agaaccact 700
 gattggacca catcgaatac cgagatgtgc gaggtggggc aggtgtgtca 750
 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctggtgggga 800
 caaaaggctg cagcactgtt gggggtcaaa attcccagaa gaccaccatc 850
 cactcagccc ctctgagggt gcttgtggcc tcctataccc acttctgctc 900
 ctcggaacctg tgcaatagtg ccagcagcag cagcgttctg ctgaactccc 950

tccctcctca agctgcccct gtcccaggag accggcagtg tcctacctgt 1000
 gtgcagcccc ttggaacctg ttcaagtggc tccccccgaa tgacctgccc 1050
 caggggcgcc actcattgtt atgatgggta cattcatctc tcaggagggtg 1100
 ggctgtccac caaaatgagc attcagggct gcgtggccca accttccagc 1150
 ttcttggtga accacaccag acaaatcggg atcttctctg cgcgtgagaa 1200
 gcgtgatgtg cagcctcctg cctctcagca tgagggaggt ggggctgagg 1250
 gcctggagtc tctcacttgg ggggtggggc tggcactggc cccagcgctg 1300
 tgggtggggag tggtttgccc ttcctgctaa ctctattacc cccacgattc 1350
 ttcaccgctg ctgaccaccc aactcaacc tccctctgac ctcataacct 1400
 aatggccttg gacaccagat tctttcccat tctgtccatg aatcatcttc 1450
 cccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500
 gcctggagca tccggacttg ccctatggga gaggggacgc tggaggagtg 1550
 gctgcatgta tctgataata cagaccctgt cctttca 1587

<210> 355
 <211> 437
 <212> PRT
 <213> Homo sapiens

<400> 355
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 Leu Pro Gly Val Gln Ala Leu Leu Cys Gln Phe Gly Thr Val Gln
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 His Val Trp Lys Val Ser Asp Leu Pro Arg Gln Trp Thr Pro Lys
 35 40 45
 Asn Thr Ser Cys Asp Ser Gly Leu Gly Cys Gln Asp Thr Leu Met
 50 55 60
 Leu Ile Glu Ser Gly Pro Gln Val Ser Leu Val Leu Ser Lys Gly
 65 70 75
 Cys Thr Glu Ala Lys Asp Gln Glu Pro Arg Val Thr Glu His Arg
 80 85 90
 Met Gly Pro Gly Leu Ser Leu Ile Ser Tyr Thr Phe Val Cys Arg
 95 100 105
 Gln Glu Asp Phe Cys Asn Asn Leu Val Asn Ser Leu Pro Leu Trp
 110 115 120
 Ala Pro Gln Pro Pro Ala Asp Pro Gly Ser Leu Arg Cys Pro Val
 125 130 135
 Cys Leu Ser Met Glu Gly Cys Leu Glu Gly Thr Thr Glu Glu Ile
 140 145 150
 Cys Pro Lys Gly Thr Thr His Cys Tyr Asp Gly Leu Leu Arg Leu

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	
				35					40					45	
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	
				50					55					60	
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	
				65					70					75	
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	
				80					85					90	
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	
				95					100					105	
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	
				110					115					120	
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	
				125					130					135	
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	
				140					145					150	
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	
				155					160					165	
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	
				170					175					180	
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	
				185					190					195	
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	
				200					205					210	
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	
				215					220					225	
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	
				230					235					240	
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	
				245					250					255	
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	
				260					265					270	

Met

<210> 358
 <211> 972
 <212> DNA
 <213> Homo sapiens

<400> 358
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 gttccttgat cctgccagac caccagccc ccggcacaga gctgctccac 150

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu
125 130 135

<210> 360
<211> 1738
<212> DNA
<213> Homo sapiens

<400> 360
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gagacgccag cgagctgggtg attggagccc tgcggagagc tcaagcgccc 150
agctctgccc caggagccca ggctgccccg tgagtcccat agttgctgca 200
ggagtggagc catgagctgc gtcctgggtg gtgtcatccc cttggggctg 250
ctgttccttg tctgcggatc ccaaggctac ctctgccc acgtcactct 300
cttagaggag ctgctcagca aataccagca caacgagtct cactcccggg 350
tccgcagagc catccccagg gaggacaagg aggagatcct catgctgcac 400
aacaagcttc ggggccaggt gcagcctcag gcctccaaca tggagtacat 450
ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggcctgg 500
gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550
tgtgatggct ggctcagggc ctctctggc aggggaggat cccggctctg 600
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accatgggtgc ccagctagat tttaaatatt ttgtggagat gggggctctg 800
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cctcagcctc tcaaagtgtc aggattatag gcatgagtca ccctgtctgg 900
ctctggctct gttcttaaca ttctgcaaaa acaacacacg tgggttccct 950
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 caagttagcc gggcatgggt gtgcgcacct gtagtcccag ctgcagtggg 1600
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 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 361
 Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe
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 Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu
 20 25 30
 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser
 35 40 45
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu
 50 55 60
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser
 65 70 75
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp
 80 85 90
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser
 95 100 105
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val
 110 115 120
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val
 125 130 135
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln
 140 145 150
 Trp His Asn Arg His Ala Leu Lys Pro
 155

<210> 362
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 362
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caagtgagtg ttaccttttc acttagtagg atgtgttggtt acgctagtaa 500
 aatagaaacc tgtgttttatt ctcagggtatt ttagaaacaa cagccatcat 550
 tttatttttat gtgtgtgttc ttggctgtat tcataaatta tatattttgg 600
 gctatcaaatt attacttcat tcaatataaa taacaatagt agaagttggtt 650
 tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700
 ttgttgtaat agcctttgaa atttacagta ctgtctctct actatcttca 750
 gattacttga ttcaaataaa ccaattatgt ttgtaattga tattaataaa 800
 accagaataa aagttcatat ctaccc 826

<210> 365
 <211> 67
 <212> PRT
 <213> Homo sapiens

<400> 365
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 Thr Val Phe Cys Val Leu Leu Ile Phe Thr Ile Ala Glu Ala Ser
 20 25 30
 Phe Ser Val Glu Asn Glu Cys Leu Val Asp Leu Cys Leu Leu Arg
 35 40 45
 Ile Cys Tyr Lys Leu Ser Gly Val Pro Asn Gln Cys Arg Val Pro
 50 55 60
 Leu Pro Ser Asp Cys Ser Lys
 65

<210> 366
 <211> 2475
 <212> DNA
 <213> Homo sapiens

<400> 366
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 tgagacatcc ttgagaagag ccacagcata agagactgcc ctgcttggtg 100
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 gttccttgca gcttttctgc ccccgccgca gtgtaccag gaccagcca 200
 tgggtgatta catctaccag cgctttcgag tcttgagca agggctggaa 250
 aaatgtaccc aagcaacgag ggcatacatt caagaattcc aagagttctc 300
 aaaaaatata tctgtcatgc tgggaagatg tcagacctac acaagtgagt 350
 acaagagtgc agtgggtaac ttggcactga gagttgaacg tgccaacgg 400
 gagattgact acatacaata ccttcagagag gctgacgagt gcatcgtatc 450
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 gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650
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 caacttctaa tgagataatc aaatataacc tgcagaagag gactgtggaa 850
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<210> 367
 <211> 402
 <212> PRT
 <213> Homo sapiens

<400> 367
 Met Met Val Ala Leu Arg Gly Ala Ser Ala Leu Leu Val Leu Phe
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 20 25 30
 Met Val His Tyr Ile Tyr Gln Arg Phe Arg Val Leu Glu Gln Gly
 35 40 45
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe
 50 55 60
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln
 65 70 75
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu
 80 85 90
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu
 95 100 105
 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala
 110 115 120
 Glu Met Leu Leu Gln Glu Ala Glu Glu Glu Lys Lys Ile Arg Thr
 125 130 135
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser
 140 145 150
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met
 155 160 165
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly
 170 175 180
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe
 185 190 195
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr
 200 205 210

Leu	Ser	Trp	Gln	Gly	Thr	Gly	Gln	Val	Ile	Tyr	Lys	Gly	Phe	Leu
				215					220					225
Phe	Phe	His	Asn	Gln	Ala	Thr	Ser	Asn	Glu	Ile	Ile	Lys	Tyr	Asn
				230					235					240
Leu	Gln	Lys	Arg	Thr	Val	Glu	Asp	Arg	Met	Leu	Leu	Pro	Gly	Gly
				245					250					255
Val	Gly	Arg	Ala	Leu	Val	Tyr	Gln	His	Ser	Pro	Ser	Thr	Tyr	Ile
				260					265					270
Asp	Leu	Ala	Val	Asp	Glu	His	Gly	Leu	Trp	Ala	Ile	His	Ser	Gly
				275					280					285
Pro	Gly	Thr	His	Ser	His	Leu	Val	Leu	Thr	Lys	Ile	Glu	Pro	Gly
				290					295					300
Thr	Leu	Gly	Val	Glu	His	Ser	Trp	Asp	Thr	Pro	Cys	Arg	Ser	Gln
				305					310					315
Asp	Ala	Glu	Ala	Ser	Phe	Leu	Leu	Cys	Gly	Val	Leu	Tyr	Val	Val
				320					325					330
Tyr	Ser	Thr	Gly	Gly	Gln	Gly	Pro	His	Arg	Ile	Thr	Cys	Ile	Tyr
				335					340					345
Asp	Pro	Leu	Gly	Thr	Ile	Ser	Glu	Glu	Asp	Leu	Pro	Asn	Leu	Phe
				350					355					360
Phe	Pro	Lys	Arg	Pro	Arg	Ser	His	Ser	Met	Ile	His	Tyr	Asn	Pro
				365					370					375
Arg	Asp	Lys	Gln	Leu	Tyr	Ala	Trp	Asn	Glu	Gly	Asn	Gln	Ile	Ile
				380					385					390
Tyr	Lys	Leu	Gln	Thr	Lys	Arg	Lys	Leu	Pro	Leu	Lys			
				395					400					

<210> 368
 <211> 2281
 <212> DNA
 <213> Homo sapiens

<400> 368
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 ctggccctga tggcgacggc ggcggtagcg cgggggtggc tgcgcgcggg 150
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catggaaact gtgggacaca gatgtggaat acaagaagaa gcaggacccc 1000
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agaacaacct agagaacacc tgagtactaa gcagcagttt tgcaaggatg 1800
ggagactggg atagcttccc atcacagaac tgtgttccat caaaaagaca 1850
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gtcatgaaag tggtaaaagt gggaaaccagt gtgctttgaa accaaattag 2050

aaacacattc cttgggaagg caaagttttc tgggacttga tcatacattt 2100
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cctctttttca gttcatcaag ttcatcagat atttgagtgc ccactctgtg 2200
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

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Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln	35	40	45	
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys	50	55	60	
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His	65	70	75	
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser	80	85	90	
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu	95	100	105	
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys	110	115	120	
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu	125	130	135	
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala	140	145	150	
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys	155	160	165	
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro	170	175	180	
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly	185	190	195	
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr	200	205	210	
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile	215	220	225	
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys	230	235	240	

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370
 <211> 1415
 <212> DNA
 <213> Homo sapiens

<400> 370
 tggcctcccc agcttgccag gcacaaggct gagcgggagg aagcgagagg 50
 catctaagca ggcagtgttt tgccttcacc ccaagtgacc atgagaggtg 100
 ccacgcgagt ctcaatcatg ctctcctag taactgtgtc tgactgtgct 150
 gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg caggcacctg 200
 ctgtgccatc agcctgtggc ttcgagggct ggggatgtgc accccgctgg 250
 ggcgggaagg cgaggagtgc caccgccgca gccacaaggt ccccttcttc 300
 aggaaacgca agcaccacac ctgtccttgc ttgoccaacc tgctgtgtc 350
 caggttcccg gacggcaggt accgctgtc catggacttg aagaacatca 400

atttttaggc gcttgctgg tctcaggata cccaccatcc ttttcctgag 450
cacagcctgg atttttatit ctgccatgaa acccagctcc catgactctc 500
ccagtcccta cactgactac cctgatctct cttgtctagt acgcacatat 550
gcacacaggc agacatacct cccatcatga catgggtccc aggctggcct 600
gaggatgtca cagcttgagg ctgtggtgtg aaagggtggc agcctgggtc 650
tcttcctgc tcaggctgcc agagagggtg taaatggcag aaaggacatt 700
ccccctccc tcccagggtg acctgctctc tttcctgggc cctgcccctc 750
tccccacatg tatccctcgg tctgaattag acattcctgg gcacaggctc 800
ttgggtgcat tgctcagagt cccaggctct ggctgaccc tcaggccctt 850
cacgtgaggt ctgtgaggac caatttgtgg gtagttcatc ttccctcgat 900
tgggttaactc cttagtttca gaccacagac tcaagattgg ctcttcccag 950
agggcagcag acagtcaccc caaggcaggt gtagggagcc caggagggcc 1000
aatcagcccc ctgaagactc tgggtccagt cagcctgtgg cttgtggcct 1050
gtgacctgtg accttctgcc agaattgtca tgcctctgag gccccctctt 1100
accacacttt accagttaac cactgaagcc cccaattccc acagcttttc 1150
cattaaaatg caaatgggtg tggttcaatc taatctgata ttgacatatt 1200
agaaggcaat tagggtgttt ccttaaaca ctcctttcca aggatcagcc 1250
ctgagagcag gttggtgact ttgaggaggg cagtcctctg tccagattgg 1300
ggtgggagca agggacaggg agcagggcag gggctgaaag gggcactgat 1350
tcagaccagg gaggcaacta cacaccaaca tgctggcttt agaataaaag 1400
caccaactga aaaaa 1415

<210> 371
<211> 105
<212> PRT
<213> Homo sapiens

<400> 371
Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Leu Val Thr
1 5 10 15
Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val
20 25 30
Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg
35 40 45
Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys
50 55 60
His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His
65 70 75

His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
				95					100					105

<210> 372
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 372
 agcgcccggg cgtcggggcg gtaaaaggcc ggagagaagg aggcaactga 50
 gaaatgtctt tcctccagga cccaagtttc ttcacatgg ggatgtgggc 100
 cattggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150
 acacagacgt gtttctgtcc aagccccaga aagcgccct ggagtacctg 200
 gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250
 aaaggagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300
 caggctgttt cctctgtcga gaggaagctg cggatctgtc ctccctgaaa 350
 agcatgttg accagctggg cgtccccctc tatgcagtgg taaaggagca 400
 catcaggact gaagtgaagg atttccagcc ttatttcaaa ggagaaatct 450
 tcctggatga aaagaaaaag ttctatgggc cacaaggcg gaagatgatg 500
 tttatgggat ttatccgtct gggagtgtgg tacaacttct tccgagcctg 550
 gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600
 gagttttcgt ggtgggatca ggaaagcagg gcattcttct tgagcaccga 650
 gaaaaagaat ttggagacaa agtaaaccta ctttctgttc tggaagctgc 700
 taagatgatc aaaccacaga ctttggcctc agagaaaaaa tgattgtgtg 750
 aaactgcca gctcaggat aaccaggac attcacctgt gttcatggga 800
 tgtattgttt cactcgtgt ccctaaggag tgagaaacc atttatactc 850
 tactctcagt atggattatt aatgtatttt aatattctgt ttaggccac 900
 taaggcaaaa tagcccaaaa acaagactga caaaaatctg aaaaactaat 950
 gaggattatt aagctaaaac ctgggaaata ggaggcttaa aattgactgc 1000
 caggctgggt gcagtggctc acacctgtaa tcccagcact ttgggaggcc 1050
 aaggtgagca agtcacttga ggtcgggagt tcgagaccag cctgagcaac 1100
 atggcgaaac cccgtctcta ctaaaaatac aaaaatcacc cgggtgtggg 1150
 ggcaggcacc tgtagtccca gctaccggg aggtgaggc aggagaatca 1200
 cttgaacctg ggaggtggag gttgcgggta gctgagatca caccactgta 1250
 ttccagcctg ggtgactgag actctaacta a 1281

<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373
 Met Ser Phe Leu Gln Asp Pro Ser Phe Phe Thr Met Gly Met Trp
 1 5 10 15
 Ser Ile Gly Ala Gly Ala Leu Gly Ala Ala Ala Leu Ala Leu Leu
 20 25 30
 Leu Ala Asn Thr Asp Val Phe Leu Ser Lys Pro Gln Lys Ala Ala
 35 40 45
 Leu Glu Tyr Leu Glu Asp Ile Asp Leu Lys Thr Leu Glu Lys Glu
 50 55 60
 Pro Arg Thr Phe Lys Ala Lys Glu Leu Trp Glu Lys Asn Gly Ala
 65 70 75
 Val Ile Met Ala Val Arg Arg Pro Gly Cys Phe Leu Cys Arg Glu
 80 85 90
 Glu Ala Ala Asp Leu Ser Ser Leu Lys Ser Met Leu Asp Gln Leu
 95 100 105
 Gly Val Pro Leu Tyr Ala Val Val Lys Glu His Ile Arg Thr Glu
 110 115 120
 Val Lys Asp Phe Gln Pro Tyr Phe Lys Gly Glu Ile Phe Leu Asp
 125 130 135
 Glu Lys Lys Lys Phe Tyr Gly Pro Gln Arg Arg Lys Met Met Phe
 140 145 150
 Met Gly Phe Ile Arg Leu Gly Val Trp Tyr Asn Phe Phe Arg Ala
 155 160 165
 Trp Asn Gly Gly Phe Ser Gly Asn Leu Glu Gly Glu Gly Phe Ile
 170 175 180
 Leu Gly Gly Val Phe Val Val Gly Ser Gly Lys Gln Gly Ile Leu
 185 190 195
 Leu Glu His Arg Glu Lys Glu Phe Gly Asp Lys Val Asn Leu Leu
 200 205 210
 Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala
 215 220 225
 Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374
 acggaccgag ggttcgaggg agggacacgg accaggaacc tgagctaggt 50
 caaagacgcc cgggccaggt gccccgtcgc aggtgcccct ggccggagat 100

gcggtaggag gggcgagcgc gagaagcccc ttcctcggcg ctgccaaccc 150
gccaccagc ccatggcgaa ccccgggctg gggctgcttc tggcgctggg 200
cctgccgttc ctgctggccc gctggggccg agcctggggg caaatacaga 250
ccacttctgc aaatgagaat agcactgttt tgccttcac caccagctcc 300
agctccgatg gcaacctgcg tccggaagcc atcactgcta tcatcgtggt 350
cttctccctc ttggctgcct tgctcctggc tgtggggctg gcactgttgg 400
tgcggaagct tcgggagaag cggcagacgg agggcaccta ccggcccagt 450
agcgaggagc agttctccca tgcagccgag gcccgggccc ctcaggactc 500
caaggagacg gtgcagggct gcctgcccat ctagggtccc tctcctgcat 550
ctgtctccct tcattgctgt gtgaccttgg ggaaaggcag tgccctctct 600
gggcagtcag atccaccag tgcttaatag cagggaagaa ggtacttcaa 650
agactctgcc cctgaggtca agagaggatg gggctattca cttttatata 700
tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375
<211> 123
<212> PRT
<213> Homo sapiens

<400> 375
Met Ala Asn Pro Gly Leu Gly Leu Leu Leu Ala Leu Gly Leu Pro
1 5 10 15
Phe Leu Leu Ala Arg Trp Gly Arg Ala Trp Gly Gln Ile Gln Thr
20 25 30
Thr Ser Ala Asn Glu Asn Ser Thr Val Leu Pro Ser Ser Thr Ser
35 40 45
Ser Ser Ser Asp Gly Asn Leu Arg Pro Glu Ala Ile Thr Ala Ile
50 55 60
Ile Val Val Phe Ser Leu Leu Ala Ala Leu Leu Leu Ala Val Gly
65 70 75
Leu Ala Leu Leu Val Arg Lys Leu Arg Glu Lys Arg Gln Thr Glu
80 85 90
Gly Thr Tyr Arg Pro Ser Ser Glu Glu Gln Phe Ser His Ala Ala
95 100 105
Glu Ala Arg Ala Pro Gln Asp Ser Lys Glu Thr Val Gln Gly Cys
110 115 120
Leu Pro Ile

<210> 376
<211> 713
<212> DNA
<213> Homo sapiens

<400> 376
aatatatcat ctatttatca ttaatcaata atgtattctt ttattccaat 50
aacatttggg ttttgggatt ttaattttca aacacagcag aatgacattt 100
tttctgtcac tattattatt gttggtatgt gaagctattt ggagatccaa 150
ttcaggaagc aacacattgg agaatggcta ctttctatca agaaataaag 200
agaaccacag tcaaccacac caatcatctt tagaagacag tgtgactcct 250
accaaagctg tcaaaaccac aggcaagggc atagttaaag gacggaatct 300
tgactcaaga ggggttaattc ttggtgctga agcctggggc aggggtgtaa 350
agaaaaacac ttagattcaa tgattgtaaa ttttaaggcaa atacacatat 400
tagtattacc ttagtgtaat gtatccctgt catatataca ataagtgaa 450
attataagta ccctatgcag ttggctggac agttctaaat tggactttat 500
taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550
acaggagatc atataatttg atacaaataa aagaaaagtg ttctctcccc 600
ttacagaatt gacattttta atgcgataca gttagaatag gaaatatgac 650
attagaaagg aagaatgaca gggagaaagg aaagaaggga aaatgttgcc 700
aaggaaaaaa aaa 713

<210> 377
<211> 90
<212> PRT
<213> Homo sapiens

<400> 377
Met Thr Phe Phe Leu Ser Leu Leu Leu Leu Val Cys Glu Ala
1 5 10 15
Ile Trp Arg Ser Asn Ser Gly Ser Asn Thr Leu Glu Asn Gly Tyr
20 25 30
Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser
35 40 45
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
65 70 75
Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
80 85 90

<210> 378
<211> 3265
<212> DNA
<213> Homo sapiens

<400> 378
gccaggaata actagagagg aacaatgggg ttattcagag gttttgtttt 50

cctcttagtt ctgtgcctgc tgcaccagtc aaataacttc ttcattaagc 100
tgaataataa tggctttgaa gatattgtca ttgttataga tcttagtgtg 150
ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200
ttctacgtac ctgtttgaag ccacagaaaa aagatTTTTT ttcaaaaatg 250
tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaagg 300
ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350
actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400
agaaaggcga atacattcac ttcacccttg accttctact tggaaaaaaa 450
caaatgaat atggaccacc aggcaaaactg tttgtocatg agtgggctca 500
cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctacc 550
gtgctaagtc aaaaaaatc gaagcaacaa ggtgttcgc aggtatctct 600
ggtagaaata gagtttataa gtgtcaagga ggcagctgtc ttagtagagc 650
atgcagaatt gattctacaa caaaactgta tggaaaagat tgtcaattct 700
ttcctgataa agtacaaaca gaaaaagcat ccataatgtt tatgcaaagt 750
attgattctg ttgttgaatt ttgtaacgaa aaaaccata atcaagaagc 800
tccaagccta caaaacataa agtgcaattt tagaagtaca tgggaggtga 850
ttagcaattc tgaggatttt aaaaacacca taccatggg gacaccacct 900
cctccacctg tcttctcatt gctgaagatc agtcaaagaa ttgtgtgctt 950
agttcttgat aagtctggaa gcatgggggg taaggaccgc ctaaatacgaa 1000
tgaatcaagc agcaaaacat ttcctgctgc agactgttga aaatggatcc 1050
tgggtgggga tggttcactt tgatagtact gccactattg taaataagct 1100
aatccaaata aaaagcagtg atgaaagaaa cacactcatg gcaggattac 1150
ctacatatcc tctgggagga acttccatct gctctggaat taaatatgca 1200
tttcaggtga ttggagagct acattcccaa ctcgatggat ccgaagtact 1250
gctgctgact gatggggagg ataacactgc aagttcttgt attgatgaag 1300
tgaaacaaag tggggccatt gttcatttta ttgctttggg aagagctgct 1350
gatgaagcag taatagagat gagcaagata acaggaggaa gtcattttta 1400
tgtttcagat gaagctcaga acaatggcct cattgatgct tttggggctc 1450
ttacatcagg aaatactgat ctctcccaga agtcccttca gctcgaaagt 1500
aagggattaa cactgaatag taatgcctgg atgaacgaca ctgtcataat 1550
tgatagtaca gtgggaaagg acacgttctt tctcatcaca tggaacagtc 1600
tgcctcccag tatttctctc tgggatccca gtggaacaat aatggaaaat 1650

ttcacagtgg atgcaacttc caaaatggcc tatctcagta ttccaggaac 1700
 tgcaaaggtg ggcacttggg catacaatct tcaagccaaa gcgaacccag 1750
 aaacattaac tattacagta acttctcgag cagcaaattc ttctgtgcct 1800
 ccaatcacag tgaatgctaa aatgaataag gacgtaaaca gtttccccag 1850
 cccaatgatt gtttacgcag aaattctaca aggatatgta cctgttcttg 1900
 gagccaatgt gactgctttc attgaatcac agaatggaca tacagaagtt 1950
 ttggaacttt tggataatgg tgcaggcgct gattctttca agaatgatgg 2000
 agtctactcc aggtatttta cagcatatac agaaaatggc agatatagct 2050
 taaaagttcg ggctcatgga ggagcaaaca ctgccaggct aaaattacgg 2100
 cctccactga atagagccgc gtacatacca ggctgggtag tgaacgggga 2150
 aattgaagca aaccgcgcaa gacctgaaat tgatgaggat actcagacca 2200
 ccttggagga tttcagccga acagcatccg gaggtgcatt tgtggtatca 2250
 caagtcccaa gccttccctt gcctgaccaa taccaccaa gtcaaatac 2300
 agaccttgat gccacagttc atgaggataa gattattctt acatggacag 2350
 caccaggaga taattttgat gttggaaaag ttcaacgtta tatcataaga 2400
 ataagtgcaa gtattcttga tctaagagac agttttgatg atgctcttca 2450
 agtaaatact actgatctgt caccaaagga ggccaactcc aaggaaagct 2500
 ttgcatttaa accagaaaat atctcagaag aaaatgcaac ccacatattt 2550
 attgccatta aaagtataga taaaagcaat ttgacatcaa aagtatccaa 2600
 cattgcacaa gtaactttgt ttatccctca agcaaatact gatgacattg 2650
 atcctacacc tactcctact cctactccta ctcttgataa aagtcataat 2700
 tctggagtta atattttctac gctgggtattg totgtgattg ggtctgttgt 2750
 aattgttaac tttattttta gtaccaccat ttgaacctta acgaagaaaa 2800
 aaatcttcaa gtagacctag aagagagttt taaaaaaca aacaatgtaa 2850
 gtaaaggata tttctgaatc ttaaaattca tcccatgtgt gatcataaac 2900
 tcataaaaaat aattttaaga tgtcggaaaa ggatactttg attaaataaa 2950
 aacctcatg gatatgtaaa aactgtcaag attaaaattt aatagtttca 3000
 tttatttggt attttatttg taagaaatag tgatgaacaa agatcctttt 3050
 tcatactgat acctggttgt atattatttg atgcaacagt tttctgaaat 3100
 gatatttcaa attgcatcaa gaaattaaaa tcacttatct gagtagtcaa 3150
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250

aaaaaaaaaa aaaaa 3265

<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

Met	Gly	Leu	Phe	Arg	Gly	Phe	Val	Phe	Leu	Leu	Val	Leu	Cys	Leu	
1				5					10					15	
Leu	His	Gln	Ser	Asn	Thr	Ser	Phe	Ile	Lys	Leu	Asn	Asn	Asn	Gly	
				20					25					30	
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp	
				35					40					45	
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser	
				50					55					60	
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn	
				65					70					75	
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr	
				80					85					90	
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val	
				95					100					105	
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln	
				110					115					120	
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro	
				125					130					135	
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly	
				140					145					150	
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe	
				155					160					165	
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys	
				170					175					180	
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn	
				185					190					195	
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys	
				200					205					210	
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe	
				215					220					225	
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met	
				230					235					240	
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His	
				245					250					255	
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg	
				260					265					270	
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr	

				590						595					600
Asn	Lys	Asp	Val	Asn	Ser	Phe	Pro	Ser	Pro	Met	Ile	Val	Tyr	Ala	
				605					610					615	
Glu	Ile	Leu	Gln	Gly	Tyr	Val	Pro	Val	Leu	Gly	Ala	Asn	Val	Thr	
				620					625					630	
Ala	Phe	Ile	Glu	Ser	Gln	Asn	Gly	His	Thr	Glu	Val	Leu	Glu	Leu	
				635					640					645	
Leu	Asp	Asn	Gly	Ala	Gly	Ala	Asp	Ser	Phe	Lys	Asn	Asp	Gly	Val	
				650					655					660	
Tyr	Ser	Arg	Tyr	Phe	Thr	Ala	Tyr	Thr	Glu	Asn	Gly	Arg	Tyr	Ser	
				665					670					675	
Leu	Lys	Val	Arg	Ala	His	Gly	Gly	Ala	Asn	Thr	Ala	Arg	Leu	Lys	
				680					685					690	
Leu	Arg	Pro	Pro	Leu	Asn	Arg	Ala	Ala	Tyr	Ile	Pro	Gly	Trp	Val	
				695					700					705	
Val	Asn	Gly	Glu	Ile	Glu	Ala	Asn	Pro	Pro	Arg	Pro	Glu	Ile	Asp	
				710					715					720	
Glu	Asp	Thr	Gln	Thr	Thr	Leu	Glu	Asp	Phe	Ser	Arg	Thr	Ala	Ser	
				725					730					735	
Gly	Gly	Ala	Phe	Val	Val	Ser	Gln	Val	Pro	Ser	Leu	Pro	Leu	Pro	
				740					745					750	
Asp	Gln	Tyr	Pro	Pro	Ser	Gln	Ile	Thr	Asp	Leu	Asp	Ala	Thr	Val	
				755					760					765	
His	Glu	Asp	Lys	Ile	Ile	Leu	Thr	Trp	Thr	Ala	Pro	Gly	Asp	Asn	
				770					775					780	
Phe	Asp	Val	Gly	Lys	Val	Gln	Arg	Tyr	Ile	Ile	Arg	Ile	Ser	Ala	
				785					790					795	
Ser	Ile	Leu	Asp	Leu	Arg	Asp	Ser	Phe	Asp	Asp	Ala	Leu	Gln	Val	
				800					805					810	
Asn	Thr	Thr	Asp	Leu	Ser	Pro	Lys	Glu	Ala	Asn	Ser	Lys	Glu	Ser	
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Descriptive Statistics		Descriptive Statistics		Descriptive Statistics	
Variable	Mean	SD	Variable	Mean	SD
Age	35.2	12.5	Gender	0.45	0.50
Education	12.8	2.1	Marital Status	0.60	0.49
Income	45.3	15.7	Employment	0.75	0.43
Health Status	2.1	1.2	Stress Level	3.5	1.8
Life Satisfaction	4.2	1.5	Resilience	5.1	2.2
Optimism	3.8	1.4	Self-Efficacy	4.5	1.9
Gratitude	4.5	1.6	Emotional Stability	3.2	1.3
Forgiveness	3.9	1.5	Empathy	4.1	1.7
Compassion	4.3	1.6	Kindness	4.0	1.8
Generosity	4.1	1.5	Patience	3.7	1.6
Humility	3.6	1.4	Modesty	3.4	1.5
Openness	4.4	1.7	Conscientiousness	4.2	1.6
Agreeableness	4.0	1.5	Neuroticism	2.8	1.2
Conscientiousness	4.1	1.6	Extraversion	3.9	1.7
Neuroticism	2.9	1.3	Introversion	3.1	1.4
Extraversion	3.7	1.6	Sensitiveness	2.5	1.1
Introversion	3.3	1.5	Emotional Stability	3.2	1.3
Sensitiveness	2.6	1.2	Empathy	4.1	1.7
Emotional Stability	3.2	1.3	Kindness	4.0	1.8
Empathy	4.1	1.7	Patience	3.7	1.6
Kindness	4.0	1.8	Modesty	3.4	1.5
Patience	3.7	1.6	Humility	3.6	1.4
Modesty	3.4	1.5	Openness	4.4	1.7
Humility	3.6	1.4	Agreeableness	4.0	1.5
Openness	4.4	1.7	Conscientiousness	4.1	1.6
Agreeableness	4.0	1.5	Neuroticism	2.9	1.3
Conscientiousness	4.1	1.6	Extraversion	3.7	1.6
Neuroticism	2.9	1.3	Introversion	3.3	1.5
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Introversion	3.3	1.5	Emotional Stability	3.2	1.3
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Emotional Stability	3.2	1.3	Kindness	4.0	1.8
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Kindness	4.0	1.8	Modesty	3.4	1.5
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Patience	3.7	1.6	Humility	3.6	1.4
Modesty	3.4	1.5	Openness	4.4	1.7
Humility	3.6	1.4	Agreeableness	4.0	1.5
Openness	4.4	1.7	Conscientiousness	4.1	1.6
Agreeableness	4.0	1.5	Neuroticism	2.9	1.3
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Kindness	4.0	1.8	Modesty	3.4	1.5
Patience	3.7	1.6	Humility	3.6	1.4
Modesty	3.4	1.5	Openness	4.4	1.7
Humility	3.6	1.4	Agreeableness	4.0	1.5
Openness	4.4	1.7	Conscientiousness	4.1	1.6
Agreeableness	4.0	1.5	Neuroticism	2.9	1.3
Conscientiousness	4.1	1.6	Extraversion	3.7	

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Leu Gln Glu Trp Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu
65 70 75
Lys Arg Gln Ile Ala Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser
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Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	125	130	135
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	140	145	150
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	155	160	165
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	170	175	180
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	185	190	195
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	200	205	210
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Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val	
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Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg	
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 Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile
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<210> 389
<211> 215
<212> PRT
<213> Homo sapiens

<400> 389
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				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 390
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<210> 391
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 391
 acaggcagag ccaatggcca gagc 24

<210> 392
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 392
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<210> 393
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 393
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 atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150
 gatgatgaag cccctgatgc tgaaccact gctgctgcaa ccaactgcgac 200
 cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250
 aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
 tattcatgct tcctgtgatt tcatccaact acttaccttg cctacgatat 400
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 agcaacataa aaaaaaaaaa a 471

<210> 394
 <211> 90
 <212> PRT
 <213> Homo sapiens

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 1 5 10 15
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr
 20 25 30
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
 35 40 45
 Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr
 50 55 60
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
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 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
 80 85 90

<210> 395
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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

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<210> 396
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 396
caggacaca ctctaccatt cgggag 26

<210> 397
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 397
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<210> 398
<211> 907
<212> DNA
<213> Homo sapiens

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gggcaggacc ccatagggga atgctacctc ctgcocttcc acctgccctg 150
gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200
ggacgcagag gacgctcaca gactccagcc ctttgttacc gagaggacac 250
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<210> 401
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 401
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 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu
 35 40 45
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu
 50 55 60
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu
 65 70 75
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu
 80 85 90
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu
 95 100 105
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala
 110 115 120
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val
 125 130 135
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu
 140 145 150
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala
 155 160 165
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln
 170 175 180
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

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<210> 402
<211> 1915
<212> DNA
<213> Homo sapiens
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<400> 402					
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acacatccag	attaaaagcc	aggaagcaca	gcaaacgtcg	agtgagagac	150
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aatcataatt	tttacttatt	aaaaaattgc	aacacaagat	caatgtccat	750
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tcacttgtac	aaaccagtt	tgttttcaaa	aatcacagt	agcaatgcaa	950
ctcatcactc	tagaaaagca	agcttaggct	acctgaaaga	ttttcccttg	1000
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tgaagagggt	ctgatttgat	tttttttttt	tcttcatgcc	tacccttttt	1250
ttggaagt	ccagccgcaa	tttgaaatga	aatgacaagg	tgtatatattg	1300

Overall sample		Non-Black		Black		
	Mean	SD	Mean	SD	Mean	SD
Demographics						
Age	20.1	1.2	20.1	1.2	20.1	1.2
Gender	50% Male		50% Male		50% Male	
SES	2.5	1.0	2.5	1.0	2.5	1.0
Personality						
Neuroticism	2.5	1.0	2.5	1.0	2.5	1.0
Extraversion	2.5	1.0	2.5	1.0	2.5	1.0
Agreeableness	2.5	1.0	2.5	1.0	2.5	1.0
Conscientiousness	2.5	1.0	2.5	1.0	2.5	1.0
Openness	2.5	1.0	2.5	1.0	2.5	1.0
Stress						
Perceived stress	2.5	1.0	2.5	1.0	2.5	1.0
Cortisol	2.5	1.0	2.5	1.0	2.5	1.0
Heart rate	2.5	1.0	2.5	1.0	2.5	1.0
BP	2.5	1.0	2.5	1.0	2.5	1.0
Health						
Physical health	2.5	1.0	2.5	1.0	2.5	1.0
Mental health	2.5	1.0	2.5	1.0	2.5	1.0
Quality of life	2.5	1.0	2.5	1.0	2.5	1.0
Intervention						
Adherence	2.5	1.0	2.5	1.0	2.5	1.0
Completion	2.5	1.0	2.5	1.0	2.5	1.0
Dropouts	2.5	1.0	2.5	1.0	2.5	1.0
Outcomes						
Stress	2.5	1.0	2.5	1.0	2.5	1.0
Health	2.5	1.0	2.5	1.0	2.5	1.0
Quality of life	2.5	1.0	2.5	1.0	2.5	1.0

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 cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850
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 aaaaaaaaaa aaaaa 1915

<210> 403
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 403
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 20 25 30
 Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg
 35 40 45
 Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu
 50 55 60
 Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr
 65 70 75
 Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala
 80 85 90
 Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile
 95 100 105
 Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile
 110 115 120
 Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn
 125 130 135
 Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe
 140 145 150
 Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg

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 ataaacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 408
 Met Lys Leu Ala Ala Leu Leu Gly Leu Cys Val Ala Leu Ser Cys
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 Ser Ser Ala Ala Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala
 20 25 30
 Gln Pro Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly
 35 40 45
 Thr Leu Ala Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu
 50 55 60
 Leu Ser Ser Leu Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser
 65 70 75
 Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val
 80 85 90
 Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly
 95 100

<210> 409
 <211> 2089
 <212> DNA
 <213> Homo sapiens

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 ggccccagct cctcagtcgc cagagacccc agcccctcag aaccagacca 200
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 agatctccat gaggcacgat ggcaacatgg tcttctctcc atttgcatg 400
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tgagattaat cctgaaacca aattaattct tgtggattac atcttgttca 800
aagggaaatg gttgacccca ttgaccoctg tcttcaccga agtcgacact 850
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tggaattttt catttaatgt ttttggaaca tgggtgacca tgggttaactg 2000
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taaattgata catatttttt aaaaaaaaaa aaaaaaaaaa 2089

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<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln	1	5	10	15
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Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro	35	40	45	
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala	50	55	60	
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu	65	70	75	
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile	80	85	90	
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met	95	100	105	
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr	110	115	120	
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro	125	130	135	
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu	140	145	150	
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe	155	160	165	
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn	170	175	180	
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe	185	190	195	
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn	200	205	210	
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn	215	220	225	
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly	230	235	240	
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr	245	250	255	
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr	260	265	270	
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys	275	280	285	

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met. Leu Val
290 295 300

Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr
305 310 315

Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr
320 325 330

Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys
335 340 345

Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile
350 355 360

Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg
365 370 375

Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val
380 385 390

Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile
395 400 405

Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe
410 415 420

His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu
425 430 435

Gly Arg Val Val Asn Pro Thr Leu Leu
440

<210> 411
<211> 636
<212> DNA
<213> Homo sapiens

<400> 411
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cccagacatg aggaggctcc tcctgggtcac cagcctggtg gttgtgctgc 100
tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
gtcaaactact ggccctcaga gcaggaccca gagaaggcct ggggcgcccg 200
tgtggtggag cctccggaga aggacgacca gctggtggtg ctgttccttg 250
tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
agggggcccca tccttcagg caccaaggcc tggatggaga ccgaggacac 350
cctgggccgt gtcctgagtc ccgagcccga ccatgacagc ctgtaccacc 400
ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450
ccaaatcacc aggtgctcct gggaccggag gaagaccaag accacatcta 500
ccacccccag tagggctcca ggggccatca ctgccccgc cctgtcccaa 550
ggcccaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600

aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412
<211> 151
<212> PRT
<213> Homo sapiens

<400> 412
Met Arg Arg Leu Leu Leu Val Thr Ser Leu Val Val Val Leu Leu
1 5 10 15
Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met
20 25 30
Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp
35 40 45
Gly Ala Arg Val Val Glu Pro Pro Glu Lys Asp Asp Gln Leu Val
50 55 60
Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu
65 70 75
Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys
80 85 90
Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro
95 100 105
Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp
110 115 120
Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln
125 130 135
Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro
140 145 150
Gln

<210> 413
<211> 1176
<212> DNA
<213> Homo sapiens

<400> 413
agaaagctgc actctgttga gctccagggc gcagtggagg gagggagtga 50
aggagctctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100
caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150
tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200
gtctccatct ctgcccagaa gctgcaagga aatcaaagac gaatgtccta 250
gtgcatttga tggcctgtat tttctccgca ctgagaatgg tgttatctac 300
cagaccttct gtgacatgac ctctgggggt ggcggctgga ccctggtggc 350
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400

125	130	135
Asn Pro Gly Tyr Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile Trp	
140	145	150
His Val Pro Asn Lys Ser Pro Met Gln	His Trp Arg Asn Ser Ser	
155	160	165
Leu Leu Arg Tyr Arg Thr Asp Thr Gly	Phe Leu Gln Thr Leu Gly	
170	175	180
His Asn Leu Phe Gly Ile Tyr Gln Lys	Tyr Pro Val Lys Tyr Gly	
185	190	195
Glu Gly Lys Cys Trp Thr Asp Asn Gly	Pro Val Ile Pro Val Val	
200	205	210
Tyr Asp Phe Gly Asp Ala Gln Lys Thr	Ala Ser Tyr Tyr Ser Pro	
215	220	225
Tyr Gly Gln Arg Glu Phe Thr Ala Gly	Phe Val Gln Phe Arg Val	
230	235	240
Phe Asn Asn Glu Arg Ala Ala Asn Ala	Leu Cys Ala Gly Met Arg	
245	250	255
Val Thr Gly Cys Asn Thr Glu His His	Cys Ile Gly Gly Gly Gly	
260	265	270
Tyr Phe Pro Glu Ala Ser Pro Gln Gln	Cys Gly Asp Phe Ser Gly	
275	280	285
Phe Asp Trp Ser Gly Tyr Gly Thr His	Val Gly Tyr Ser Ser Ser	
290	295	300
Arg Glu Ile Thr Glu Ala Ala Val Leu	Leu Phe Tyr Arg	
305	310	

<210> 415
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 415
 gcggagccgg cgccggctgc gcagaggagc cgctctcgcc gccgccacct 50
 cggctgggag cccacgaggc tgccgcatcc tgccctcgga acaatgggac 100
 tcggcgcgcg aggtgcttgg gccgcgctgc tcctggggac gctgcaggtg 150
 ctacgcgtgc tgggggcccgc ccatgaaagc gcagccatgg cggcatctgc 200
 aaacatagag aattctgggc ttccacacaa ctccagtgt aactcaacag 250
 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350
 caccaccatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400
 tctcaacaaa tatgacttct accaccttaa agtctacacc caaaacaaca 450
 agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500

125	130	135
Thr His Asn Ser Ser Val Thr Ser Ala Ala Ser Ser Val Thr Ile		
140	145	150
Thr Thr Thr Met His Ser Glu Ala Lys Lys Gly Ser Lys Phe Asp		
155	160	165
Thr Gly Ser Phe Val Gly Gly Ile Val Leu Thr Leu Gly Val Leu		
170	175	180
Ser Ile Leu Tyr Ile Gly Cys Lys Met Tyr Tyr Ser Arg Arg Gly		
185	190	195
Ile Arg Tyr Arg Thr Ile Asp Glu His Asp Ala Ile Ile		
200	205	

<210> 417
 <211> 1728
 <212> DNA
 <213> Homo sapiens

<400> 417
 cagccgggtc ccaagcctgt gcctgagcct gagcctgagc ctgagcccga 50
 gccgggagcc ggtcgcgggg gctccgggct gtgggacgc tgggccccca 100
 gcgatggcga ccctgtgggg aggccttctt cggcttggtt ccttgctcag 150
 cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgcag ctgtcagacg 200
 ccgccaagaa tttcgaggat gtcagatgta aatgtatctg ccctccctat 250
 aaagaaaatt ctgggcatat ttataataag aacatatctc agaaagattg 300
 tgattgcctt catgtttgtg agcccatgcc tgtgcggggg cctgatgtag 350
 aagcatactg tctacgctgt gaatgcaaat atgaagaaag aagctctgtc 400
 acaatcaagg ttaccattat aatttatctc tccatttttg gccttctact 450
 tctgtacatg gtatatctta ctctggttga gccatactg aagaggcgcc 500
 tcttttgaca tgcacagttg atacagagtg atgatgatat tggggatcac 550
 cagccttttg caaatgcaca cgatgtgcta gcccgtccc gcagtcgagc 600
 caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650
 tccaagagca gcgaaagtct gtctttgacc ggcatgttgt cctcagctaa 700
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750
 agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800
 ccaactgttg ctggaagatt caaaaactgga agcaaaaact tgcttgattt 850
 ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900
 aaagtacgcc aataagtcct ttctattttg tgactttttac taataaaaaat 950
 aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat tttcaggggt 1050
 tttgttggtg ttgttttttg tttgtttggt ttggtgggag aggggaggga 1100
 tgcctgggaa gtggttaaca acttttttca agtcacttta ctaaacaac 1150
 ttttgtaaag agacottacc ttctattttc gagtttcatt tatattttgc 1200
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300
 atctaaaatg cctgggtggct tttcacaaaa agcagatttt cttcatgtac 1350
 tgtgatgtct gatgcaatgc atcctagaac aaactggcca tttgctagtt 1400
 tactctaaag actaaacata gtcttggtgt gtgtgggtctt actcatcttc 1450
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggctgtggt gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggctgg ggttgtgggt gcctcttctg aaaggctctaa 1650
 ccattattgg ataactggct tttttcttcc tatgtcctct ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 418
 Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu
 1 5 10 15
 Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu
 20 25 30
 Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile
 35 40 45
 Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn
 50 55 60
 Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met
 65 70 75
 Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu
 80 85 90
 Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile
 95 100 105
 Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Leu Tyr Met Val
 110 115 120
 Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly
 125 130 135

His	Ala	Gln	Leu	Ile	Gln	Ser	Asp	Asp	Asp	Ile	Gly	Asp	His	Gln
				140					145					150
Pro	Phe	Ala	Asn	Ala	His	Asp	Val	Leu	Ala	Arg	Ser	Arg	Ser	Arg
				155					160					165
Ala	Asn	Val	Leu	Asn	Lys	Val	Glu	Tyr	Ala	Gln	Gln	Arg	Trp	Lys
				170					175					180
Leu	Gln	Val	Gln	Glu	Gln	Arg	Lys	Ser	Val	Phe	Asp	Arg	His	Val
				185					190					195
Val	Leu	Ser												

<210> 419
 <211> 681
 <212> DNA
 <213> Homo sapiens

<400> 419
 gcacctgcga ccaccgtgag cagtcatggc gtactccaca gtgcagagag 50
 tcgctctggc ttctgggctt gtcctggctc tgctcgctgct gctgccaag 100
 gccttcctgt cccgcgggaa gcggcaggag ccgcccga cacctgaagg 150
 aaaattgggc cgatttcac ctatgatgca tcatcaccag gcaccctcag 200
 atggccagac tcctggggct cgtttcaga ggtctcacct tgccgaggca 250
 tttgcaaagg ccaaaggatc aggtggaggt gctggaggag gaggtagtgg 300
 aagaggtctg atggggcaga ttattccaat ctacggtttt gggatttttt 350
 tatatatact gtacattcta ttaaggtaa gtagaatcat cctaatacata 400
 ttacatcaat gaaaatctaa tatggcgata aaaatcattg totacattaa 450
 aacttcttat agttcataaa attatttcaa atccatcatc tctttaaatc 500
 ctgcctctc ttcatgaggt acttaggata gccattattt cagtttcaca 550
 taagaatgtt tactcaatgt ttaagtgtt tgccccaaaa ttcacaacta 600
 acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650
 gagtataca attcaatgca ctcccctgcc a 681

<210> 420
 <211> 128
 <212> PRT
 <213> Homo sapiens

<400> 420
 Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu
 1 5 10 15
 Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg
 20 25 30
 Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly
 35 40 45

Arg	Phe	Pro	Pro	Met	Met	His	His	His	Gln	Ala	Pro	Ser	Asp	Gly	
				50					55					60	
Gln	Thr	Pro	Gly	Ala	Arg	Phe	Gln	Arg	Ser	His	Leu	Ala	Glu	Ala	
				65					70					75	
Phe	Ala	Lys	Ala	Lys	Gly	Ser	Gly	Gly	Gly	Ala	Gly	Gly	Gly	Gly	
				80					85					90	
Ser	Gly	Arg	Gly	Leu	Met	Gly	Gln	Ile	Ile	Pro	Ile	Tyr	Gly	Phe	
				95					100					105	
Gly	Ile	Phe	Leu	Tyr	Ile	Leu	Tyr	Ile	Leu	Phe	Lys	Val	Ser	Arg	
				110					115					120	
Ile	Ile	Leu	Ile	Ile	Leu	His	Gln								
				125											

<210> 421
 <211> 1630
 <212> DNA
 <213> Homo sapiens

<400> 421
 cggctcgagt gcagctgtgg ggagatttca gtgcattgcc tcccctgggt 50
 gctcttcattc ttggatttga aagttgagag cagcatgttt tgcccactga 100
 aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150
 ttgaatgttt cccgcctga gctaacagtc catgtgggtg attcagctct 200
 gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
 actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300
 tattactcca atctcagtgt gcctattggg cgcttccaga accgcgtaca 350
 cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
 tgcaagaggc tgaccaggga acctatatct gtgaaatccg cctcaaaggg 450
 gagagccagg tgttcaagaa ggcggtggta ctgcatgtgc ttccagagga 500
 gcccaaagag ctcatggtcc atgtgggtgg attgattcag atgggatgtg 550
 ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatattt 600
 tcaggacggc gcgcaaagga ggagattgta tttogttact accacaaact 650
 caggatgtct gtggagtact ccagagctg gggccacttc cagaatcgtg 700
 tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750
 ggagtgaggg agtcagatgg aggaaactac acctgcagta tccacctagg 800
 gaacctggtg ttcaagaaaa ccattgtgct gcatgtcagc ccggaagagc 850
 ctgcaacact ggtgaccccc gcagccctga ggctctggt cttgggtggt 900
 aatcagttgg tgatcattgt gggaattgtc tgtgccacaa tcctgctgct 950
 ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000

tgaattctac agtcttgggtg aagaacacga agaagactaa tccagagata 1050
aaagaaaaac cctgccattht tgaaagatgt gaaggggaga aacacattta 1100
ctccccaata attgtacggg aggtgatcga ggaagaagaa ccaagtgaat 1150
aatcagaggc cacctacatg accatgcacc cagtttggcc ttctctgagg 1200
tcagatcgga acaactcact tgaaaaaaag tcagggtggg gaatgccaaa 1250
aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300
ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgatttc 1350
agactcccg c tctcccagct gtcctcctgt ctcatgttt ggtcaatata 1400
ctgaagatgg agaatttgga gcctggcaga gagactggac agctctggag 1450
gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500
aactggccc tgggaaccag gctgagctga gtggcctcaa accccccgtt 1550
ggatcagacc ctctgtggg cagggttctt agtggatgag ttactgggaa 1600
gaatcagaga taaaaacaa cccaaatcaa 1630

<210> 422
<211> 394
<212> PRT
<213> Homo sapiens

<400> 422
Met Phe Cys Pro Leu Lys Leu Ile Leu Leu Pro Val Leu Leu Asp
1 5 10 15
Tyr Ser Leu Gly Leu Asn Asp Leu Asn Val Ser Pro Pro Glu Leu
20 25 30
Thr Val His Val Gly Asp Ser Ala Leu Met Gly Cys Val Phe Gln
35 40 45
Ser Thr Glu Asp Lys Cys Ile Phe Lys Ile Asp Trp Thr Leu Ser
50 55 60
Pro Gly Glu His Ala Lys Asp Glu Tyr Val Leu Tyr Tyr Tyr Ser
65 70 75
Asn Leu Ser Val Pro Ile Gly Arg Phe Gln Asn Arg Val His Leu
80 85 90
Met Gly Asp Ile Leu Cys Asn Asp Gly Ser Leu Leu Leu Gln Asp
95 100 105
Val Gln Glu Ala Asp Gln Gly Thr Tyr Ile Cys Glu Ile Arg Leu
110 115 120
Lys Gly Glu Ser Gln Val Phe Lys Lys Ala Val Val Leu His Val
125 130 135
Leu Pro Glu Glu Pro Lys Glu Leu Met Val His Val Gly Gly Leu
140 145 150
Ile Gln Met Gly Cys Val Phe Gln Ser Thr Glu Val Lys His Val

	155		160		165
Thr Lys Val Glu	Trp Ile Phe Ser Gly	Arg Arg Ala Lys Glu	Glu		
	170	175	180		
Ile Val Phe Arg	Tyr Tyr His Lys Leu	Arg Met Ser Val Glu	Tyr		
	185	190	195		
Ser Gln Ser Trp	Gly His Phe Gln Asn	Arg Val Asn Leu Val	Gly		
	200	205	210		
Asp Ile Phe Arg	Asn Asp Gly Ser Ile	Met Leu Gln Gly Val	Arg		
	215	220	225		
Glu Ser Asp Gly	Gly Asn Tyr Thr Cys	Ser Ile His Leu Gly	Asn		
	230	235	240		
Leu Val Phe Lys	Lys Thr Ile Val Leu	His Val Ser Pro Glu	Glu		
	245	250	255		
Pro Arg Thr Leu	Val Thr Pro Ala Ala	Leu Arg Pro Leu Val	Leu		
	260	265	270		
Gly Gly Asn Gln	Leu Val Ile Ile Val	Gly Ile Val Cys Ala	Thr		
	275	280	285		
Ile Leu Leu Leu	Pro Val Leu Ile Leu	Ile Val Lys Lys Thr	Cys		
	290	295	300		
Gly Asn Lys Ser	Ser Val Asn Ser Thr	Val Leu Val Lys Asn	Thr		
	305	310	315		
Lys Lys Thr Asn	Pro Glu Ile Lys Glu	Lys Pro Cys His Phe	Glu		
	320	325	330		
Arg Cys Glu Gly	Glu Lys His Ile Tyr	Ser Pro Ile Ile Val	Arg		
	335	340	345		
Glu Val Ile Glu	Glu Glu Glu Pro Ser	Glu Lys Ser Glu Ala	Thr		
	350	355	360		
Tyr Met Thr Met	His Pro Val Trp Pro	Ser Leu Arg Ser Asp	Arg		
	365	370	375		
Asn Asn Ser Leu	Glu Lys Lys Ser Gly	Gly Gly Met Pro Lys	Thr		
	380	385	390		
Gln Gln Ala Phe					

<210> 423
 <211> 963
 <212> DNA
 <213> Homo sapiens

<400> 423
 ctatgaagaa gcttcctgga aaacaataag caaaggaaaa caaatgtgtc 50
 ccattctcaca tggttctacc ctactaaaga caggaagatc ataaactgac 100
 agataactgaa attgtaagag ttggaaacta cattttgcaa agtcattgaa 150
 ctctgagctc agttgcagta ctcgggaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcggaaac cagctctcgt ctccgttggc 250
 cctgcacccct cctcctgggtg gcgtgtgatg gctttgattc tgctgaccc 300
 gtgcgtgggg atgggtgtcg ggctgggtggc tctggggatt tgggtctgtca 350
 tgcagcgcaa ttacctacaa gatgagaatg aaaatogcac aggaactctg 400
 caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450
 aaagggcact ttcaaaggtc ataaatgcag cccctgtgac acaaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggcacia cttaacatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tcctgaagat 600
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtcga atgaggtctg gaagtgggag 700
 gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750
 aggaaatatg aattgtgctt attttcataa tgggaaaatg caccctacct 800
 tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850
 aaggtggacc aactacctta atgcaaagag gtggacagga taacacagat 900
 aagggtctta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950
 aaaaaaaaaa aaa 963

<210> 424
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 424
 Met Gln Asp Glu Asp Gly Tyr Ile Thr Leu Asn Ile Lys Thr Arg
 1 5 10 15
 Lys Pro Ala Leu Val Ser Val Gly Pro Ala Ser Ser Ser Trp Trp
 20 25 30
 Arg Val Met Ala Leu Ile Leu Leu Ile Leu Cys Val Gly Met Val
 35 40 45
 Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn
 50 55 60
 Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln
 65 70 75
 Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser Glu Leu
 80 85 90
 Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr Asn
 95 100 105
 Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn
 110 115 120
 Leu Thr Trp Glu Glu Ser Lys Gln Tyr Cys Thr Asp Met Asn Ala

	125		130		135
Thr Leu Leu Lys	Ile Asp Asn Arg Asn	Ile Val Glu Tyr Ile	Lys		
	140	145	150		
Ala Arg Thr His	Leu Ile Arg Trp Val	Gly Leu Ser Arg Gln	Lys		
	155	160	165		
Ser Asn Glu Val	Trp Lys Trp Glu Asp	Gly Ser Val Ile Ser	Glu		
	170	175	180		
Asn Met Phe Glu	Phe Leu Glu Asp Gly	Lys Gly Asn Met Asn	Cys		
	185	190	195		
Ala Tyr Phe His	Asn Gly Lys Met His	Pro Thr Phe Cys Glu	Asn		
	200	205	210		
Lys His Tyr Leu	Met Cys Glu Arg Lys	Ala Gly Met Thr Lys	Val		
	215	220	225		
Asp Gln Leu Pro					

<210> 425
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 425
 tgcagcccct gtgacacaaa ctgg 24

<210> 426
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 426
 ctgagataac cgagccatcc tcccac 26

<210> 427
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 427
 gcttcctgac actaaggctg totgctagtc agaattgcct caaaaagag 49

<210> 428
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<220>
 <223> Synthetic oligonucleotide probe

 <400> 434
 caactactgg ctaaagctgg tgaa 24

 <210> 435
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 435
 cctttctgta taggtgatac ccaatga 27

 <210> 436
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 436
 tggccatccc taccagagggc aaaa 24

 <210> 437
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 437
 ctgaagacga cgcgattac ta 22

 <210> 438
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 438
 ggcagaaatg ggaggcaga 19

 <210> 439
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 439
 tgctctgttg gctacggctt tagtccctag 30

 <210> 440
 <211> 22

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 440
 agcagcagcc atgtagaatg aa 22

<210> 441
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 441
 aatacgaaca gtgcacgctg at 22

<210> 442
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 442
 tccagagagc caagcacggc aga 23

<210> 443
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 443
 tctagccagc ttggctccaa ta 22

<210> 444
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 444
 cctggctcta gcaccaactc ata 23

<210> 445
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 445
 tcagtggccc taaggagatg ggcct 25

<210> 446
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 446
 caggatacag tgggaatctt gaga 24

 <210> 447
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
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<211> 245

<212> PRT

<213> Homo Sapien

<400> 495

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Pro	Ser	Lys	Gly	Lys	Thr	Ser	Cys	Asp	Lys	Asn	Lys	Leu	Asn	Val
				35					40					45
Phe	Ser	Arg	Val	Lys	Leu	Phe	Gly	Ser	Lys	Lys	Arg	Arg	Arg	Arg
				50					55					60
Arg	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu	Tyr	Ser
				65					70					75
Arg	Gln	Gly	Tyr	His	Leu	Gln	Leu	Gln	Ala	Asp	Gly	Thr	Ile	Asp
				80					85					90
Gly	Thr	Lys	Asp	Glu	Asp	Ser	Thr	Tyr	Thr	Leu	Phe	Asn	Leu	Ile
				95					100					105
Pro	Val	Gly	Leu	Arg	Val	Val	Ala	Ile	Gln	Gly	Val	Gln	Thr	Lys
				110					115					120
Leu	Tyr	Leu	Ala	Met	Asn	Ser	Glu	Gly	Tyr	Leu	Tyr	Thr	Ser	Glu
				125					130					135
Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe	Glu	Asn
				140					145					150
Tyr	Tyr	Val	Thr	Tyr	Ser	Ser	Met	Ile	Tyr	Arg	Gln	Gln	Gln	Ser
				155					160					165
Gly	Arg	Gly	Trp	Tyr	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Glu	Ile	Met
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Lys	Gly	Asn	His	Val	Lys	Lys	Asn	Lys	Pro	Ala	Ala	His	Phe	Leu
				185					190					195
Pro	Lys	Pro	Leu	Lys	Val	Ala	Met	Tyr	Lys	Glu	Pro	Ser	Leu	His
				200					205					210
Asp	Leu	Thr	Glu	Phe	Ser	Arg	Ser	Gly	Ser	Gly	Thr	Pro	Thr	Lys

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His Asn Glu Ser Thr					
	245				

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 gcaaaggaaa aaacaccaag gttgggttcc ttctgacat tggcagtgcc 250
 ccagtagggg tgggatgagc gaatattccc aaagctaaag tcccacaccc 300
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<213> Homo Sapien

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Cys Pro Arg Gly Thr Lys Ser Leu Cys Gln Lys Gln Leu Leu Ile
35 40 45
Leu Leu Ser Lys Val Arg Leu Cys Gly Gly Arg Pro Ala Arg Pro
50 55 60
Asp Arg Gly Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu
65 70 75
Phe Cys Arg Gln Gly Phe Tyr Leu Gln Ala Asn Pro Asp Gly Ser
80 85 90
Ile Gln Gly Thr Pro Glu Asp Thr Ser Ser Phe Thr His Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Thr Ile Gln Ser Ala Lys
110 115 120
Leu Gly His Tyr Met Ala Met Asn Ala Glu Gly Leu Leu Tyr Ser
125 130 135
Ser Pro His Phe Thr Ala Glu Cys Arg Phe Lys Glu Cys Val Phe
140 145 150
Glu Asn Tyr Tyr Val Leu Tyr Ala Ser Ala Leu Tyr Arg Gln Arg
155 160 165
Arg Ser Gly Arg Ala Trp Tyr Leu Gly Leu Asp Lys Glu Gly Gln
170 175 180
Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Ala Ala Ala His
185 190 195
Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu Pro Ser
200 205 210
Leu His Ser Val Pro Glu Ala Ser Pro Ser Ser Pro Pro Ala Pro
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				140					145					150
Glu	Asn	Tyr	Tyr	Val	Ile	Tyr	Ser	Ser	Met	Leu	Tyr	Arg	Gln	Gln
				155					160					165
Glu	Ser	Gly	Arg	Ala	Trp	Phe	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Gln
				170					175					180
Ala	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Pro	Ala	Ala	His
				185					190					195
Phe	Leu	Pro	Lys	Pro	Leu	Glu	Val	Ala	Met	Tyr	Arg	Glu	Pro	Ser
				200					205					210
Leu	His	Asp	Val	Gly	Glu	Thr	Val	Pro	Lys	Pro	Gly	Val	Thr	Pro
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Ser	Lys	Ser	Thr	Ser	Ala	Ser	Ala	Ile	Met	Asn	Gly	Gly	Lys	Pro
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 caaaaaacaa acaatcaaaa aaaaagacag tttattaaaa atgacacaaa 2800
 tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaaacia 2850
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 <213> Homo Sapien

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 35 40 45
 Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val
 50 55 60
 Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser
 65 70 75
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile
 80 85 90
 Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu
 95 100 105
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe
 110 115 120
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg
 125 130 135
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu
 140 145 150
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser
 155 160 165

Tyr	Ala	Phe	Asn	Arg	Ile	Pro	Ser	Leu	Arg	Arg	Leu	Asp	Leu	Gly	170	175	180
Glu	Leu	Lys	Arg	Leu	Ser	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	185	190	195
Leu	Ser	Asn	Leu	Arg	Tyr	Leu	Asn	Leu	Ala	Met	Cys	Asn	Leu	Arg	200	205	210
Glu	Ile	Pro	Asn	Leu	Thr	Pro	Leu	Ile	Lys	Leu	Asp	Glu	Leu	Asp	215	220	225
Leu	Ser	Gly	Asn	His	Leu	Ser	Ala	Ile	Arg	Pro	Gly	Ser	Phe	Gln	230	235	240
Gly	Leu	Met	His	Leu	Gln	Lys	Leu	Trp	Met	Ile	Gln	Ser	Gln	Ile	245	250	255
Gln	Val	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Asn	Leu	Gln	Ser	Leu	Val	260	265	270
Glu	Ile	Asn	Leu	Ala	His	Asn	Asn	Leu	Thr	Leu	Leu	Pro	His	Asp	275	280	285
Leu	Phe	Thr	Pro	Leu	His	His	Leu	Glu	Arg	Ile	His	Leu	His	His	290	295	300
Asn	Pro	Trp	Asn	Cys	Asn	Cys	Asp	Ile	Leu	Trp	Leu	Ser	Trp	Trp	305	310	315
Ile	Lys	Asp	Met	Ala	Pro	Ser	Asn	Thr	Ala	Cys	Cys	Ala	Arg	Cys	320	325	330
Asn	Thr	Pro	Pro	Asn	Leu	Lys	Gly	Arg	Tyr	Ile	Gly	Glu	Leu	Asp	335	340	345
Gln	Asn	Tyr	Phe	Thr	Cys	Tyr	Ala	Pro	Val	Ile	Val	Glu	Pro	Pro	350	355	360
Ala	Asp	Leu	Asn	Val	Thr	Glu	Gly	Met	Ala	Ala	Glu	Leu	Lys	Cys	365	370	375
Arg	Ala	Ser	Thr	Ser	Leu	Thr	Ser	Val	Ser	Trp	Ile	Thr	Pro	Asn	380	385	390
Gly	Thr	Val	Met	Thr	His	Gly	Ala	Tyr	Lys	Val	Arg	Ile	Ala	Val	395	400	405
Leu	Ser	Asp	Gly	Thr	Leu	Asn	Phe	Thr	Asn	Val	Thr	Val	Gln	Asp	410	415	420
Thr	Gly	Met	Tyr	Thr	Cys	Met	Val	Ser	Asn	Ser	Val	Gly	Asn	Thr	425	430	435
Thr	Ala	Ser	Ala	Thr	Leu	Asn	Val	Thr	Ala	Ala	Thr	Thr	Thr	Pro	440	445	450
Phe	Ser	Tyr	Phe	Ser	Thr	Val	Thr	Val	Glu	Thr	Met	Glu	Pro	Ser	455	460	465
Gln	Asp	Glu	Ala	Arg	Thr	Thr	Asp	Asn	Asn	Val	Gly	Pro	Thr	Pro	470	475	480

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<210> 503
<211> 373
<212> PRT
<213> Homo Sapien

<400> 503
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35 40 45
Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln
50 55 60
Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu
65 70 75
Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu
80 85 90
Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp
95 100 105
Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val
110 115 120
Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro
125 130 135
Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr
140 145 150
Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr
155 160 165
Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro
170 175 180
Pro Lys Ser Arg Ile Asp Tyr Asn His Pro Gly Arg Val Leu Leu
185 190 195
Gln Asn Leu Thr Met Ser Tyr Ser Gly Leu Tyr Gln Cys Thr Ala
200 205 210
Gly Asn Glu Ala Gly Lys Glu Ser Cys Val Val Arg Val Thr Val
215 220 225

Gln Tyr Val Gln Ser Ile Gly Met Val	Ala Gly Ala Val Thr Gly	230	235	240
Ile Val Ala Gly Ala Leu Leu Ile Phe	Leu Leu Val Trp Leu Leu	245	250	255
Ile Arg Arg Lys Asp Lys Glu Arg Tyr	Glu Glu Glu Glu Arg Pro	260	265	270
Asn Glu Ile Arg Glu Asp Ala Glu Ala	Pro Lys Ala Arg Leu Val	275	280	285
Lys Pro Ser Ser Ser Ser Ser Gly Ser	Arg Ser Ser Arg Ser Gly	290	295	300
Ser Ser Ser Thr Arg Ser Thr Ala Asn	Ser Ala Ser Arg Ser Gln	305	310	315
Arg Thr Leu Ser Thr Asp Ala Ala Pro	Gln Pro Gly Leu Ala Thr	320	325	330
Gln Ala Tyr Ser Leu Val Gly Pro Glu	Val Arg Gly Ser Glu Pro	335	340	345
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Ser Met Ile Pro Ser Gln Ser Arg Ala	Phe Gln Thr Val	365	370	

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 <211> 3060
 <212> DNA
 <213> Homo Sapien

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140	145	150
Ser Glu Glu Ile Gly Ser Asp Phe Lys	Ile Lys Cys Glu Pro Lys	
155	160	165
Glu Gly Ser Leu Pro Leu Gln Tyr Glu	Trp Gln Lys Leu Ser Asp	
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Ser Gln Lys Met Pro Thr Ser Trp Leu	Ala Glu Met Thr Ser Ser	
185	190	195
Val Ile Ser Val Lys Asn Ala Ser Ser	Glu Tyr Ser Gly Thr Tyr	
200	205	210
Ser Cys Thr Val Arg Asn Arg Val Gly	Ser Asp Gln Cys Leu Leu	
215	220	225
Arg Leu Asn Val Val Pro Pro Ser Asn	Lys Ala Gly Leu Ile Ala	
230	235	240
Gly Ala Ile Ile Gly Thr Leu Leu Ala	Leu Ala Leu Ile Gly Leu	
245	250	255
Ile Ile Phe Cys Cys Arg Lys Lys Arg	Arg Glu Glu Lys Tyr Glu	
260	265	270
Lys Glu Val His His Asp Ile Arg Glu	Asp Val Pro Pro Pro Lys	
275	280	285
Ser Arg Thr Ser Thr Ala Arg Ser Tyr	Ile Gly Ser Asn His Ser	
290	295	300
Ser Leu Gly Ser Met Ser Pro Ser Asn	Met Glu Gly Tyr Ser Lys	
305	310	315
Thr Gln Tyr Asn Gln Val Pro Ser Glu	Asp Phe Glu Arg Thr Pro	
320	325	330
Gln Ser Pro Thr Leu Pro Pro Ala Lys	Phe Lys Tyr Pro Tyr Lys	
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Thr Asp Gly Ile Thr Val Val		
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 <211> 1705
 <212> DNA
 <213> Homo Sapien

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 <211> 206
 <212> PRT

[illegible]

<400> 507

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Val	Val	Leu	Pro	Cys 35	Leu	Gly	Phe	Thr	Leu 40	Leu	Leu	Trp	Ser	Gln 45
Val	Ser	Gly	Ala	Gln 50	Gly	Gln	Glu	Phe	His 55	Phe	Gly	Pro	Cys	Gln 60
Val	Lys	Gly	Val	Val 65	Pro	Gln	Lys	Leu	Trp 70	Glu	Ala	Phe	Trp	Ala 75
Val	Lys	Asp	Thr	Met 80	Gln	Ala	Gln	Asp	Asn 85	Ile	Thr	Ser	Ala	Arg 90
Leu	Leu	Gln	Gln	Glu 95	Val	Leu	Gln	Asn	Val 100	Ser	Asp	Ala	Glu	Ser 105
Cys	Tyr	Leu	Val	His 110	Thr	Leu	Leu	Glu	Phe 115	Tyr	Leu	Lys	Thr	Val 120
Phe	Lys	Asn	His	His 125	Asn	Arg	Thr	Val	Glu 130	Val	Arg	Thr	Leu	Lys 135
Ser	Phe	Ser	Thr	Leu 140	Ala	Asn	Asn	Phe	Val 145	Leu	Ile	Val	Ser	Gln 150
Leu	Gln	Pro	Ser	Gln 155	Glu	Asn	Glu	Met	Phe 160	Ser	Ile	Arg	Asp	Ser 165
Ala	His	Arg	Arg	Phe 170	Leu	Leu	Phe	Arg	Arg 175	Ala	Phe	Lys	Gln	Leu 180
Asp	Val	Glu	Ala	Ala 185	Leu	Thr	Lys	Ala	Leu 190	Gly	Glu	Val	Asp	Ile 195
Leu	Leu	Thr	Trp	Met 200	Gln	Lys	Phe	Tyr	Lys 205	Leu				

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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 <211> 177
 <212> PRT
 <213> Homo Sapien

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 35 40 45
 Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu
 50 55 60
 Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys
 65 70 75
 Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe
 80 85 90
 Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser
 95 100 105
 Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln
 110 115 120
 Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn
 125 130 135
 Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His
 140 145 150
 Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala

09963.1.501

155

160

165

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 510

<211> 996

<212> DNA

<213> Homo Sapien

<400> 510

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<210> 511

<211> 251

<212> PRT

<213> Homo Sapien

<400> 511

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Val	Cys	Ser	Met	Ser	Val	Leu	Arg	Ala	Tyr	Pro	Asn	Ala	Ser	Pro
				20					25					30

Leu Leu Gly Ser Ser Trp Gly Gly Leu Ile His Leu Tyr Thr Ala
35 40 45

Thr Ala Arg Asn Ser Tyr His Leu Gln Ile His Lys Asn Gly His
50 55 60

Val Asp Gly Ala Pro His Gln Thr Ile Tyr Ser Ala Leu Met Ile
65 70 75

Arg Ser Glu Asp Ala Gly Phe Val Val Ile Thr Gly Val Met Ser
80 85 90

Arg Arg Tyr Leu Cys Met Asp Phe Arg Gly Asn Ile Phe Gly Ser
95 100 105

His Tyr Phe Asp Pro Glu Asn Cys Arg Phe Gln His Gln Thr Leu
110 115 120

Glu Asn Gly Tyr Asp Val Tyr His Ser Pro Gln Tyr His Phe Leu
125 130 135

Val Ser Leu Gly Arg Ala Lys Arg Ala Phe Leu Pro Gly Met Asn
140 145 150

Pro Pro Pro Tyr Ser Gln Phe Leu Ser Arg Arg Asn Glu Ile Pro
155 160 165

Leu Ile His Phe Asn Thr Pro Ile Pro Arg Arg His Thr Arg Ser
170 175 180

Ala Glu Asp Asp Ser Glu Arg Asp Pro Leu Asn Val Leu Lys Pro
185 190 195

Arg Ala Arg Met Thr Pro Ala Pro Ala Ser Cys Ser Gln Glu Leu
200 205 210

Pro Ser Ala Glu Asp Asn Ser Pro Met Ala Ser Asp Pro Leu Gly
215 220 225

Val Val Arg Gly Gly Arg Val Asn Thr His Ala Gly Gly Thr Gly
230 235 240

Pro Glu Gly Cys Arg Pro Phe Ala Lys Phe Ile
245 250

<210> 512
<211> 2015
<212> DNA
<213> Homo Sapien

<400> 512
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ctgctgggag gttgggggtct ctgggagctc tgcaggcccc agcaccgcga 150
gagcagacac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200
ctagcaccgg gccacgccgc tctggaaact caaacgctga gcgctgagac 250
ctcttctagg gcctcaaccc cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgcaagag agaccaggag tttcacaaaa 350
 acatctccca acttcatggt gctgatcgcc acctccgtgg agacatcagc 400
 cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450
 caggcagtga tcccgaggaa gccatctttg acaccctttg caccgatgac 500
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 cacctccaca gaagctaagg gcctgtcctc agagagcagt gcctcttccg 600
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 caccacagag tcagctgcac ctcatgccac ggttgggacc ccactcccca 1050
 ctaacagcgc cacagaaaga gaagtgcag caccgggggc cagaccctc 1100
 agtggagctc tggtcacagt tagcaggaat cccctggaag aaacctcagc 1150
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 tctccataga ggctgggtca gcagtgggca aaacaacttc ctttgcctggg 1250
 agctctgctt cctcctacag cccctcgga gcccgcctca agaacttcac 1300
 cccttcagag acaccgacca tggacatcgc aaccaagggg cccttcccca 1350
 ccagcagga ccctcttcct tctgtccctc cgactacaac caacagcagc 1400
 cgagggacga acagcacctt agccaagatc acaacctcag cgaagaccac 1450
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 agacgtgagt gcaggtgaaa atggaggttt cctcctcctg cggctgagtg 1550
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 cagcagctcc accggaact ccacgccac gcgcctcact tccaggtctc 1650
 ctactgcgt gtcaggagag gctaacggac atcagctgca gccaggcatg 1700
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 gactgcagct gcgttactgt gctgagaggt acccagaagg ttcccatgaa 1800
 gggcagcatg tccaagcccc taaccccaga tgtggcaaca ggaccctcgc 1850
 tcacatccac cggagtgtat gtatggggag gggcttcacc tgttcccaga 1900

ggtgtccttg gactcacctt ggcacatgtt ctgtgtttca gtaaagagag 1950
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 gtggcccaaa aaaaa 2015

<210> 513
 <211> 482
 <212> PRT
 <213> Homo Sapien

<400> 513
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 Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala
 35 40 45
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
 50 55 60
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
 65 70 75
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
 80 85 90
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
 95 100 105
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
 110 115 120
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
 125 130 135
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
 140 145 150
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
 155 160 165
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
 170 175 180
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
 185 190 195
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
 200 205 210
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
 215 220 225
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
 230 235 240
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
 245 250 255

Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp
				260					265					270
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser
				275					280					285
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile
				290					295					300
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr
				305					310					315
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro
				320					325					330
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr
				335					340					345
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu
				350					355					360
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val
				365					370					375
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly
				380					385					390
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro
				395					400					405
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr
				410					415					420
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro
				425					430					435
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr
				440					445					450
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met
				455					460					465
Lys	Pro	Gln	Gln	Pro	Arg	Pro	Arg	Leu	Pro	Gly	Arg	Gly	Arg	Pro
				470					475					480

Gln Thr

<210> 514

<211> 2284

<212> DNA

<213> Homo Sapien

<400> 514

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ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150

cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200

gacaaaaact aaactgaaat ttaaaatggt cttcggggga gaaggagct 250

ggtcaggctg gtctcaaact cctgacctag tgatccaccc tcctcggcct 1900
 cccaaagtgc tgggattaca ggcattgagcc accacagctg gcccccttct 1950
 gttttatgtt tggtttttga gaaggaatga agtgggaacc aaattaggta 2000
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 tatgcaaaga aacagggttag gacatctagg ttccaattca ttcacattct 2150
 tggttccaga taaaatcaac tgtttatata aatttctaata ggatttgctt 2200
 ttctttttat atggattcct ttaaaactta ttccagatgt agttccttcc 2250
 aattaaatat ttgaataaat cttttgttac tcaa 2284

<210> 515

<211> 431

<212> PRT

<213> Homo Sapien

<400> 515

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Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys	Leu
				20					25					30
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu
				35					40					45
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln
				50					55					60
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly
				65					70					75
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala
				80					85					90
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala
				95					100					105
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile
				110					115					120
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu
				125					130					135
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val
				140					145					150
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp
				155					160					165
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp
				170					175					180
His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu
				185					190					195

Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser	
				200					205					210	
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala	
				215					220					225	
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	
				230					235					240	
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	
				245					250					255	
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	
				260					265					270	
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	
				275					280					285	
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr	
				290					295					300	
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	
				305					310					315	
Ser	Leu	Glu	Thr	Ile	Pro	Phe	Thr	Glu	Ile	Ser	Asn	Leu	Thr	Leu	
				320					325					330	
Asn	Thr	Gly	Asn	Val	Tyr	Asn	Pro	Thr	Ala	Leu	Ser	Met	Ser	Asn	
				335					340					345	
Val	Glu	Ser	Ser	Thr	Met	Asn	Lys	Thr	Ala	Ser	Trp	Glu	Gly	Arg	
				350					355					360	
Glu	Ala	Ser	Pro	Gly	Ser	Ser	Ser	Gln	Gly	Ser	Val	Pro	Glu	Asn	
				365					370					375	
Gln	Tyr	Gly	Leu	Pro	Phe	Glu	Lys	Trp	Leu	Leu	Ile	Gly	Ser	Leu	
				380					385					390	
Leu	Phe	Gly	Val	Leu	Phe	Leu	Val	Ile	Gly	Leu	Val	Leu	Leu	Gly	
				395					400					405	
Arg	Ile	Leu	Ser	Glu	Ser	Leu	Arg	Arg	Lys	Arg	Tyr	Ser	Arg	Leu	
				410					415					420	
Asp	Tyr	Leu	Ile	Asn	Gly	Ile	Tyr	Val	Asp	Ile					
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<210> 516
 <211> 2749
 <212> DNA
 <213> Homo Sapien

<220>
 <221> unsure
 <222> 1869, 1887
 <223> unknown base

<400> 516
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ctgaggggacc accggaagta ctggtgcagg aagggtggga tcctcttctc 200
tcgctgctct ggcaccatct atgcagaaga agaaggccag gagacaatga 250
agggcaggggt gtccatccgt gacagccgcc aggagctctc gctcattgtg 300
accctgtgga acctcaccct gcaagacgct ggggagtact ggtgtgggggt 350
cgaaaaacgg ggccccgatg agtctttact gatctctctg ttctgtctttc 400
caggaccctg ctgtcctccc tcccccttctc ccaccttcca gcctctgggt 450
acaacacgcc tgcagcccaa ggcaaaagct cagcaaacc agcccccagg 500
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tgagtttgag ggccagtggt cctgatgaac gctcacaccc cttcagctta 1700

Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu	80	85	90
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr	95	100	105
Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile	110	115	120
Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser	125	130	135
Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala	140	145	150
Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu	155	160	165
Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu	170	175	180
Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr	185	190	195
Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro	200	205	210
Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala	215	220	225
Glu	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg	230	235	240
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu	245	250	255
Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His	260	265	270
Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln	275	280	285
Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Leu	Thr	Ala	Glu	Glu	Lys	290	295	300
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro	305	310	315
Pro	Leu	His	Thr	Ser	Glu	Glu	Glu	Leu	Gly	Phe	Ser	Lys	Phe	Val	320	325	330

Ser Ala

<210> 518

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

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<400> 524
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<210> 525
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<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 525
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<210> 526
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 526
tatcccaatg cctccccact gctc 24

<210> 527
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<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 527
gatgaacttg gcgaaggggc ggca 24

<210> 528
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 528
agggaggatt atccttgacc tttgaagacc 30

<210> 529
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 529
gaagcaagtg cccagctc 18

<210> 530
<211> 18
<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 530

cggtccctg ctctttgg 18

<210> 531

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 531

caccgtagct gggagcgac tcac 24

<210> 532

<211> 18

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 532

agtgtagtc aagctccc 18

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